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LUCENT SHUTTERS RESEARCH GROUP THAT DEVELOPED UNIX

BY ALEX HANDY

Lucent Technologies has officially closed down department 1127, the research group responsible for the creation of Unix in 1969.

The decision to dissolve the department was an attempt by Bell Labs to shake up the research environment and get the innovation juices flowing more freely, said Lucent spokesman Dick Muldoon.

Ring a bell? The original Bell Labs logo.

The reorganization has not resulted in any layoffs, and Unix co-creator Dennis Ritchie is still working within Bell Labs, Muldoon said.

Bell Labs, the research arm of AT&T, was created in 1924 out of the ashes of Western Electric's engineering department. In 1996, AT&T spun off its manufacturing and research divisions into Lucent, which now claims ownership of the Murray Hill, N.J., home of Bell Labs.

Department 1127 was responsible for extending the functionality of Multics, an early time-sharing operating system created in 1964. Multics was jointly developed by Bell Labs, General Electric and the Massachusetts Institute of Technology. Unix was initially a slimmed-down form of Multics.

In 1973, Unix was rewritten in the C programming language, making it one of the first portable operating systems. In the

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BEA Sweet On Plumtree Software

BY ALEX HANDY

BEA Systems in late August announced a plan to acquire Plumtree Software, maker of Plumtree Enterprise Web Suite, which combines portal and content management software with collaboration, integration and search capabilities. BEA will reportedly pay US$200 million for the San Francisco-based company, or around $5.50 per share, subject to shareholder approval.

Plumtree's portal software runs under both Java EE and .NET, and is suitable for integrating disparate business systems into individual composite applications, the company claims.

"Plumtree's core competency is cross-platform enterprise connectivity and productivity," said Plumtree CEO John Kunze in a statement. "We give people a place to collaborate and a face to their enterprise business processes or composite services. BEA's 'Think liquid' vision is powerful and completely aligned with the long-standing culture and aspirations of our team," he added, referring to the marketing tag line for BEA's SOA framework.

"Over 50 percent of the customers coming to Plumtree will be new customers to BEA," said Kevin Faulkner, BEA's vice president of investor relations. Faulkner said the cross-platform nature of Plumtree's portal software will bring more .NET competency to BEA, traditionally a Java-centric company.

Plumtree will remain headquartered in San Francisco, and its 400-plus employees will become part of a new BEA product unit. The acquisition is expected to be finalized during the coming fall.

Plumtree was founded in 1996 and currently claims to have 21 million users worldwide, including Airbus, Mazda, and the U.S. Navy. ▮

News of the Eclipse World

Debut conference showcases dependency tools; Sybase-led Data Tools Platform project approved

BY EDWARD J. CORREIA

NEW YORK — Three days, two floors and 550 developers. Attendees of BZ Media's premiere EclipseWorld conference at The Roosevelt Hotel here were greeted not only with more than 50 classes and tutorials, but also with an exhibit hall teeming with software makers presenting their latest products and news of what's to come.

SD Times SHOW REPORT

Open-source integration ser-

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SD Times Photo: Alan Zeichick

The kickoff keynote at EclipseWorld was delivered by Mike Milinkovich, executive director of the Eclipse Foundation.

SYNAPSE: DON'T CALL IT AN ESB

BY ALEX HANDY

Taking the name of a term that describes how different parts of the brain connect, Synapse, a newly announced open-source Web services brokering project, is now in the warm environment of the Apache incubator. The project was announced in late August by the myriad companies contributing to its creation, including Blue Titan Software, Infravio, Iona Technologies and Sonic Software.

While the actual coding of Synapse has not yet begun, Infravio has announced that it will contribute a large chunk of code from its own brokering software, X-broker, a move that will be followed by the other contributing companies in the Synapse project.

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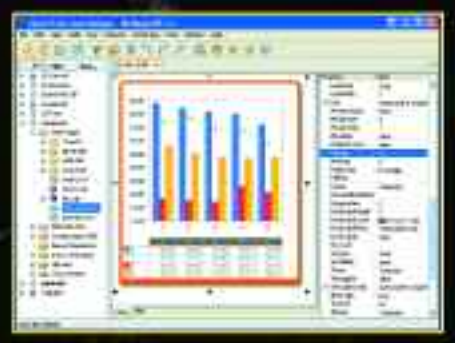
Chart FX for Java - Eclipse



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Acting CEO Arnold 'Leading Candidate' at Borland

Company also announces Core SDP will be based solely on Eclipse

BY JENNIFER DEJONG

Borland Software will likely appoint acting CEO Scott Arnold to the top spot vacated in July by Dale Fuller. "I believe Scott Arnold would be an exceptional CEO for Borland. He is the leading candidate for the job," said the company's chief marketing officer, Rick Jackson, in an interview with SD Times late last month.

Borland also announced that, going forward, its application life-cycle management (ALM) offering, Core SDP, will be based solely on the Eclipse open-source framework. "We chose Eclipse because it is cross-platform and supports multiple languages, and because of the ecosystem that has emerged around it," said Jackson. The current version of Core SDP, released in March, is available on both Borland PrimeTime (the framework underlying its popular Java IDE, JBuilder) and on Eclipse, said Pat Kerpan, Borland's chief technology officer. The news follows the company's May announcement that next year's release of JBuilder, codenamed Peleton, will be built on Eclipse.

Front-runner Arnold had been Borland's executive vice president and COO.

'THAT WAS OUR MISTAKE'

Jackson admitted that the company has in recent months caused confusion in the marketplace, creating the impression that it was all but abandoning its developer products, such as JBuilder, in favor of Core SDP.

"We have said [to Wall Street] that our focus is not on IDEs; it's on ALM. It sounded like we are leaving IDEs behind," he said. "That was our mistake." Borland's new message is that the developer role is the central role in the overall life cycle, which also includes line-of-business executives, project managers, analysts, architects and testers. "You also need expertise around technology processes, skills and mentoring," said Jackson, referring to Borland's professional services offerings, which augment Core SDP.

Borland delivered Core Analyst, Core Architect, Core Developer and Core Tester in March. Future Core SDP releases will provide role-specific tools for nontechnical project managers and executives, as well as the ability for customers to create their own role-specific tools, said Kerpan. Borland did not specify delivery dates. Nor did it confirm that the appointment of Arnold, Borland's former executive vice president and COO, was official, or indicate when the company will announce its new CEO. "I can't say. I'm not on the board of directors," said Jackson.

Asked to elaborate on an earlier plan to support the Microsoft .NET platform in Core SDP, Jackson said the ALM offering will allow developers to deploy applications on that platform.

.NET developers who want to make use of Borland Together modeling tools and its CaliberRM requirements offerings do so in Visual Studio, using Borland products designed for Microsoft's development environment, he said. ▮

The Most Important Feature: Saving Money

Study: Low price per seat, maintenance costs key features of configuration management

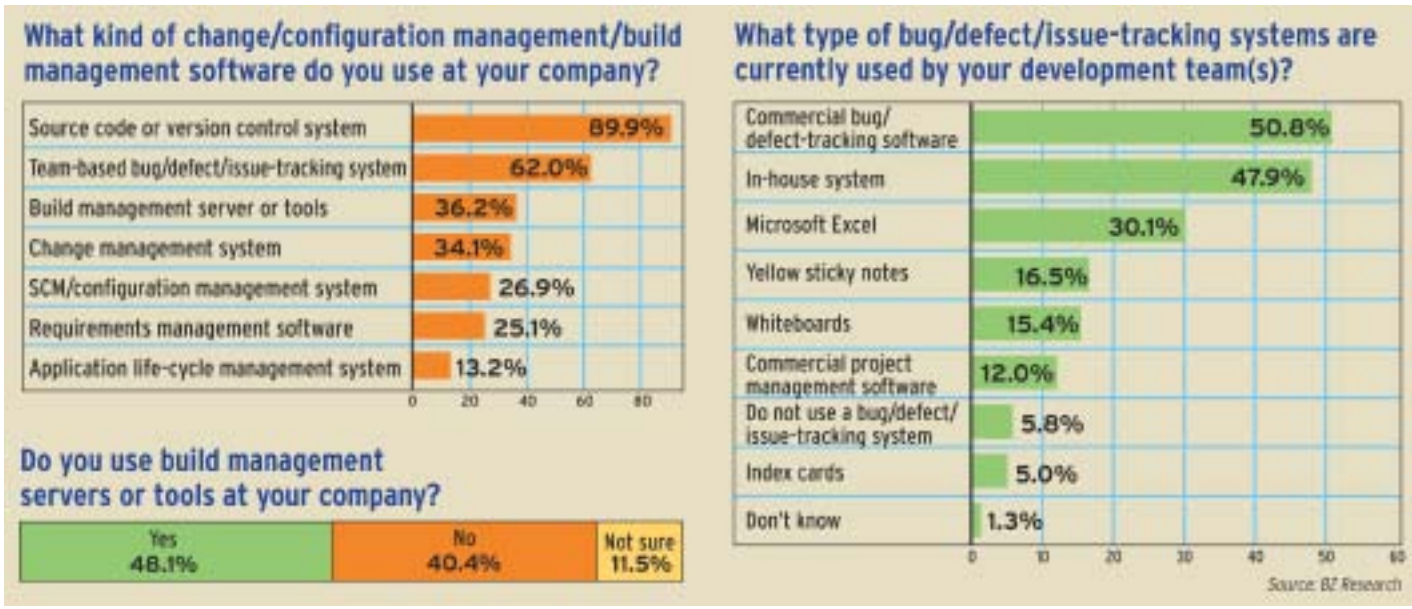
BY ALAN ZEICHICK

Nearly all software development organizations use some sort of source code or version control systems, but very few use requirements management and application life-cycle management solutions. That's according to a recent study conducted by BZ Research.

This study was performed in late July, and was completed by 412 individuals. The results have an accuracy of 2.5 percentage points. BZ Research is a subsidiary of BZ Media, publisher of SD Times.

According to the study, 89.9 percent of all developers—that is, nearly 9 out of 10—said that their organization uses a source code or version control system, while 62.0 percent said that there was a team-based bug-, defect- or issue-tracking system currently in use.

Other types of tooling didn't fare as well in the study. Only 36.2 percent of respondents said that they had a build management server or tools, 34.1 percent had a change management system, and 26.9 percent had an SCM or configuration management system. At the low end, 25.1 percent said they had requirements management software, and only 1 out of 8—13.2 percent—had application life-cycle management software.


What kind of change/configuration management/build management software do you use at your company?
Source code or version control system 89.9%
Team-based bug/defect/issue-tracking system 62.0%
Build management server or tools 36.2%
Change management system 34.1%
SCM/configuration management system 26.9%
Requirements management software 25.1%
Application life-cycle management system 13.2%
0 20 40 60 80
Do you use build management servers or tools at your company?
Yes 48.1%
No 40.4%
Not sure 11.5%
What type of bug/defect/issue-tracking systems are currently used by your development team(s)?
Commercial bug/defect-tracking software 50.8%
In-house system 47.9%
Microsoft Excel 30.1%
Yellow sticky notes 16.5%
Whiteboards 15.4%
Commercial project management software 12.0%
Do not use a bug/defect/issue-tracking system 5.8%
Index cards 5.0%
Don't know 1.3%
0 10 20 30 40 50 60
Source: BZ Research

As part of this research, the study asked respondents to rank 17 different features on a 4-point scale, in terms of how important those features are when evaluating a change management system: One was not important, and 4 was very important. When the results were tabulated and a mean score calculated, the most important feature was "low maintenance costs," with an average ranking of 3.35.

The next most important features, using that same metric, were low price per seat, at 3.14; strong security on the asset repository, at 3.05; multiple level of access control, at 2.90; and vendor reputation, at 2.89.

"Code safety is important. Given that these systems have (and need, of course) security, data encryption etc., backup/recovery/repair management must be fully integrated and easy," said one anonymous respondent to the study, echoing a familiar theme that appeared often in the comments.

The least important features, from the list provided, were cross-platform server software, with an average response of 2.46; integrated requirements management system, at 2.35; and hosted solution (instead of being on the developers' own servers), at 1.75. For that last question, 53.0 percent of respondents ranked this feature as a 1—that is, not important at all.

Some study participants had specific suggestions for their vendors. The system "should be able to handle large binary files easily and should be able to

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Implementing Accessibility Standards

It's the right thing to do, say experts, right from the start

BY ALEX HANDY

Mark Melonson makes a living using computers that he'll never see. Since he was born, his vision has slowly degraded to the point that he is now legally and functionally blind. But that hasn't stopped Melonson from continuing his career as a security research specialist with Grey Hat Research in Houston.

Melonson's ability to function unsighted in the wildly biased computer world is a testament to human adaptability, but that's not to say that he's had an easy time of it. Melonson builds and works on his home computers, and depending on his situation, sometimes works on up to five machines at once. Turning each computer into a functional tool for himself is half the battle.

Melonson said that he doubts most developers even know that the blind can use computers, and as a result, they don't make their software and Web sites accessible to him. "There are so many people who just have Flash-based Web sites, and they are, like, totally inaccessible. They cannot simply rely on assistive technology vendors to create workarounds," said Melonson.

But the world of assistive technology has come a long way since Melonson's eyesight began to dwindle. And for developers who wish to make their products usable by the blind, or by folks with other disabilities, such as paraplegics or users with debilitating palsies, the tools are now available to make accessible software easier to write, right from the start.

Legally blind, Mark Melonson makes a living writing code that he will never see.

ACCESS BY CONTRACT

Peter Korn, Sun Microsystems' accessibility architect, said that the industry is entering a major new phase of accessibility standards: access by contract. "Everything on the screen is an object, in the true object-oriented sense of the word; they each have methods on them." In particular, he said, this collection of methods becomes the accessibility interface. "These methods provide the information that users of accessibility technology need. We may have a button on the screen. I can ask the button, 'Are you accessible?' I can ask the button, 'Where are you, do you have a name, do you have a description?' It says, 'Yes, my description is this or that.'"

This new generation of accessibility tools relies on the operating system and developer APIs. Thanks to more pervasive tools and standards, writing software for the handicapped is much easier these days, but that ease can only be had if an application is designed right from the beginning to integrate universal access standards.

Rob Haverty, technology evangelist for Microsoft's accessible technology group, said that early implementation is key when it comes to integrating support for handicapped users.

"Our program managers are expected to include in their specifications everything that is needed for accessibility," said Haverty. Microsoft's developers are encouraged to create a "multimodal interface where you are not conveying info in one way only, for example using color only to convey info."

Haverty went on to say that accessibility means conforming to the operating system. "One of the things we encourage in-house developers to do is, whenever possible, stick with standard controls instead of custom controls. As we see the development environment becoming richer, if you look at our new platform coming out, that was code-named Avalon, it makes it easier for a developer to customize the look of a control or the UI without having to create a custom control, because when you use standard controls, a lot of access info is given for free," said Haverty.

Paul Snayd, program director of IBM's accessibility technical team, concurred. He said that APIs can make life much easier for both user and developer alike, and that the key to

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News Briefs

NEW PRODUCTS

DataArt has released **NetChart**, a charting system for financial ASP.NET applications. The component, priced at US$299 for one Web site or $499 for a multisite server, can pull data from XML data sources, as well as .NET XMLDocument and .NET DataTable sources. The software also includes an integrated graph designer and 26 two-dimensional and three-dimensional chart types . . . Advanced Micro Devices has released **SimNow**, a free downloadable tool that emulates the company's single-core and dual-core Athlon 64 and Opteron processors. It also emulates AMD's prerelease Pacifica virtualization technology, set to ship in early 2006 . . . Developer Express now is offering **XtraPivotGrid**, a multidimensional data analysis component library for .NET Windows Forms applications. The component is designed to allow users to manipulate data in a way that is similar to Microsoft's Excel, but also to change the data reports and charts visually to provide different or multiple perspectives. The software costs US$399 with source code, or $299 without source.

UPGRADES

Version 3.2 of Compuware's **Abend-AID Fault Manager** combines mainframe and distributed fault diagnostic capabilities into a single application. The new version also integrates with Compuware's Changepoint and HP's OpenView Operations software, which are system management consoles. A benefit of this new integration is that OpenView Operations now has visibility into OS/390 and z/OS environments . . . Real Software has shipped **RealBasic Release 2**. The update focuses on reliability improvements in the IDE's code editor, window editor, menu editor, compiler and debugger, but also adds some new programming features . . . BluePhoenix Solutions is offering a version of its **DBMSMigrator** software that can automatically convert ADABAS/Natural applications to Java. ADABAS/Natural is a 4GL database system from Software AG . . . Version 2.0 of **CaseComplete**, a use-case and requirements gathering system from Serlio Software, adds custom fields, spell checking, model browsing, enhanced reporting and easier data entry and editing. The US$495 software also lets developers customize the use-case design to fit corporate templates . . . Ants Software has released version 3.2 of **Ants Data Server**, its SQL database. The new release improves compatibility with competitive Oracle, Microsoft and Sybase databases by supporting dynamic SQL generation from stored procedures. It also has a new embedded deployment mode, and is designed to run lock-free when running on 64-bit Linux on Opteron and Xeon processors . . . BEA Systems has shipped **WebLogic Server 9.0**, an upgrade to its Java application server that adds support for J2EE 1.4, Spring, Apache Beehive and Web services. The company also is offering a new set of professional services, called **Mission Critical Support Continuum**, to help customers with round-the clock strategic planning, release and migration assistance, and phone support . . . Version 2.3.4 of **Intercept Studio**, an application monitoring system by AVIcode, improves delivery of monitoring agents to the appropriate .NET servers. It also aggregates exception information, and makes it easier for developers to find specific exceptions by separating critical and noncritical errors. In addition, it detects spikes in events and automatically restricts repetitive alerts for similar events in order to reduce clutter and consume fewer system resources.

PEOPLE

Advanced Micro Devices has hired **Jeff VerHeul** as VP of silicon design. VerHeul had been in charge of IBM's engineering and technology services business . . . Portal developer MindBridge Software has promoted **Mike Clovis** to director of software development. Clovis joined MindBridge in 1998 as senior application developer . . . **The Apache Software Foundation** has started a moderated mailing list specifically to encourage participation by women in its projects. To join the list, write to women-subscribe@apache.org, with a brief sentence or two describing who you are and why you want to join. ▮

Ada Gets First Makeover in a Decade

AdaCore offerings to be based on Ada 2005 standard, expected next year

BY JENNIFER DEJONG

It doesn't make headlines as often as other programming languages, but Ada is alive and well and getting its first update since 1995.

New York City-based AdaCore was expected to announce last month two offerings based on the Ada 2005 standard: GNAT Pro (an Ada IDE for professional developers) and GNAT Academic 2005 (a free version for university students). Used in industries such as air traffic control and defense, Ada has a niche in large-scale "safety-critical" applications, where a bug in the code can mean the difference between life and death, said AdaCore president Robert Dewar.

The technical work on Ada 2005 has been completed, and final approval from the International Standards Organization, which oversees the language, is expected next year, said Dewar. AdaCore expects to deliver GNAT Academic 2005 this month, and plans to release GNAT Pro, which costs US$14,000 per year for five seats, in January 2006. The version number has not yet been decided. Earlier AdaCore updates were based on the Ada 1995 ISO standard.

MULTIPLE INHERITANCE

New to Ada 2005 (and to the forthcoming AdaCore offerings) is support for Java-like interfaces for multiple inheritance. Dewar offered a simple example: If an application includes a persistence library and another data structure, such as a balanced tree, a developer could create a persistence, balanced tree. (A balanced tree is a tree where no leaf is much farther away from the root than any other leaf.)

Enabling multiple inheritance increases code reuse in Ada. The notion of code reuse can appear at odds with the requirements of safety-critical applications, Dewar said. "You need to be able to write a component that works, and is certified for use with no changes at all." Ada, which is designed to be more static, allows the developer to that, but dynamic languages, such as Java, do not.

In Java, errors may not be caught until runtime, but in Ada they are caught by the compiler, he said.

Also new to AdaCore's 2005 offerings is support for "mutually dependent" package specifications, enabling better interoperability with Java, and complete support for "all of the world's natural languages," said Dewar.

Earlier versions did not support Japanese characters, for example. ■

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This Is Its Quest: A Unified Product Strategy

Can new integration vision, platform bring together seemingly disparate offerings?

BY JENNIFER DEJONG

Quest Software is on, ahem, a quest. Its mission is not to expand its Toad database tools, extend its product line for monitoring ERP, SAP, Java and .NET applications, or augment its operating system management tools—although those things will likely happen.

A more pressing goal for the Irvine-Calif.-based company is to articulate a cohesive strategy around its seemingly disparate product offerings and integrate them into a single "application management platform," said Quest's senior director of application management solutions, Tyler Jewell. "The company has succeeded by offering tactical solutions to problems that occur on a day-to-day basis. But how will Quest be strategic for the future?"

Thanks to its Toad product line, which eases database management; JProbe and other offerings for pinpointing performance bottlenecks; and its operating system tools for simplifying Windows—and, more recently, Linux and Unix—management, Quest has grown steadily since its 1987 founding.

The company reported a 16 percent increase, to US$107.1 million, in its Q2 2005 earnings last month, compared with Q2 2004. Total 2005 annual revenues are expected to range from $452 million to $467 million, compared with $389 million in 2004. Quest also announced earlier this summer that it has completed its acquisition of Lindon, Utah-based Vintela, enabling Quest to deliver user authentication and single sign-on capabilities on Linux and Unix, not just Windows.

CONSISTENT THEMES

Quest has marketed and sold its tools for managing databases, applications and operating systems separately. But some consistent themes—performance, availability and change management—run through the three arenas in which the company plays, according to Jewell. A performance problem could occur in an application, a database or in the operating system infrastructure, he said. "To find out where it's coming from, I need a holistic view."

Quest envisions an integrated application management platform, which will let IT managers "do a deep dive into each layer," spotting problems and initiating the change management process to fix them, he said. "That process has to flow across all systems. You need expertise in all areas." The offering will be aimed at

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"We deeply regret this incident"

Kevin Kessinger, EVP, Citigroup June 2005

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Sybase's ASE Adapts to Explosive Data Growth

BY EDWARD J. CORREIA

If there's a single constant in today's business climate, it's the growth of enterprise data. It's that rapid expansion that database maker Sybase indicated was behind changes in Adaptive Server Enterprise 15, the latest version of its database management system released Sept. 15.

Tom Traubitz, Sybase's senior marketing manager, said of ASE 15's 1-exabyte single database upward limit: "That's the largest server instance we can support, but I don't think anybody will be able to get enough [hard] drives together to get there." One exabyte equals 1,000 pedabytes.

"The story that resonates deeply with all of our customers is the concept of data explosion," said Kathleen Schaub, vice president of marketing for the information technology and solutions group. "The amount of data that companies are having to deal with and the requirement to keep it online for compliance or business intelligence purposes is overwhelming customers."

It also causes problems with regard to database maintenance, she said. "There's a drive to reduce the cost of maintaining the data environment to as low as possible so that money can be diverted to [other] applications."

The new edition, still priced at US$1,495 per Linux, Unix and Windows server including five user licenses, is "a major new set of engines, solutions and features," Schaub said, noting that it is almost totally backward compatible. A free express version for Linux also is available.

Among the new capabilities is encryption, an $8,000-per-server option that Traubitz said works like a permission-based access control system, and is therefore compatible with existing apps. "If you don't have permission to decrypt a column, you get the same error as if you didn't have permission to use that column, so existing applications trap that error the same as they trap a lack of permission error."

Some sophisticated algorithms help keep performance from lagging. "We can index and process on cyphertext," Traubitz said. So, "if you looked up a Social Security number and that column was encrypted, rather than decrypting the entire column...we encrypt the Social Security number and search the encrypted column for that." ▮

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Lucent Shuts Unix Group

◂ continued from page 1

early 1980s, AT&T began selling Unix System III commercially. Eventually, AT&T incorporated numerous offshoots of the Unix code trunk into Unix System V, the most influential and common distribution of the OS.

In the early 1990s, AT&T sold the rights to Unix and its source code to Novell, which used the software to create UnixWare, its integrated NetWare platform. In 1994, Novell sold off its myriad Unix properties, with the source code going to The Santa Cruz Operation, later called The SCO Group.

Bell Labs hadn't been working on Unix-related projects since the 1990s, so the closure of department 1127 can be seen as the final footnote in the company's history with the operating system. ▮

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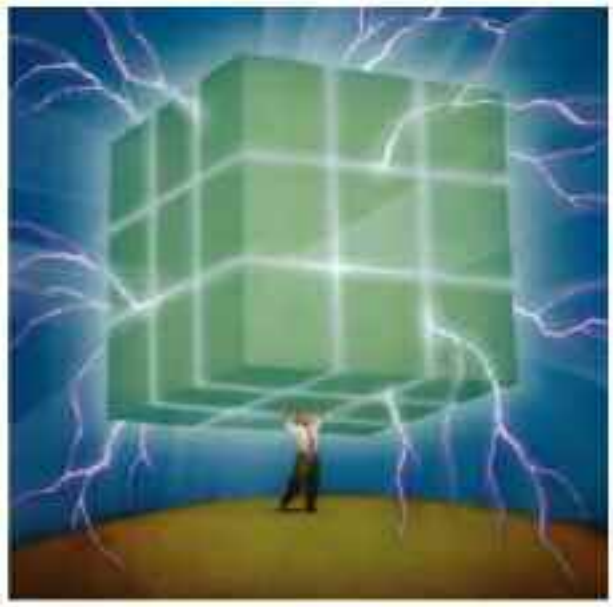

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Transforming the Way Data Is Transformed

Xenos introduces GoXML tools, site with on-the-fly calculations

BY DAVID RUBINSTEIN

Building off its acquisition of XML Global in 2003, Toronto-based Xenos Group last month debuted GoXML Transform Designer, a new engine for doing "any-to-any" transformations.

GoXML represents a new developer-focused brand for Xenos, which sells transformation tools under the TerminalOne name for high-volume print streams off mainframes. To accompany the new product, Xenos also has launched a GoXML Web site, from where the transformation engine can be downloaded and where developers can find video examples of common transformations, according to Patrick Smith, director of product management for GoXML.

"We've packaged up our mapping technology for a developer desktop," Smith explained. The engine provides a drag-and-drop way to get from source to target, with the distinguishing capability of allowing on-the-fly manipulations and calculations on data while repurposing it, Smith said, with 90 built-in functions, including such things as filtering, string extractions, mathematical functions, Boolean checks, reformatting and creating a derived field as a result of a calculation. "There are a lot of transformation engines out there. This is a big differentiator for us," he said.

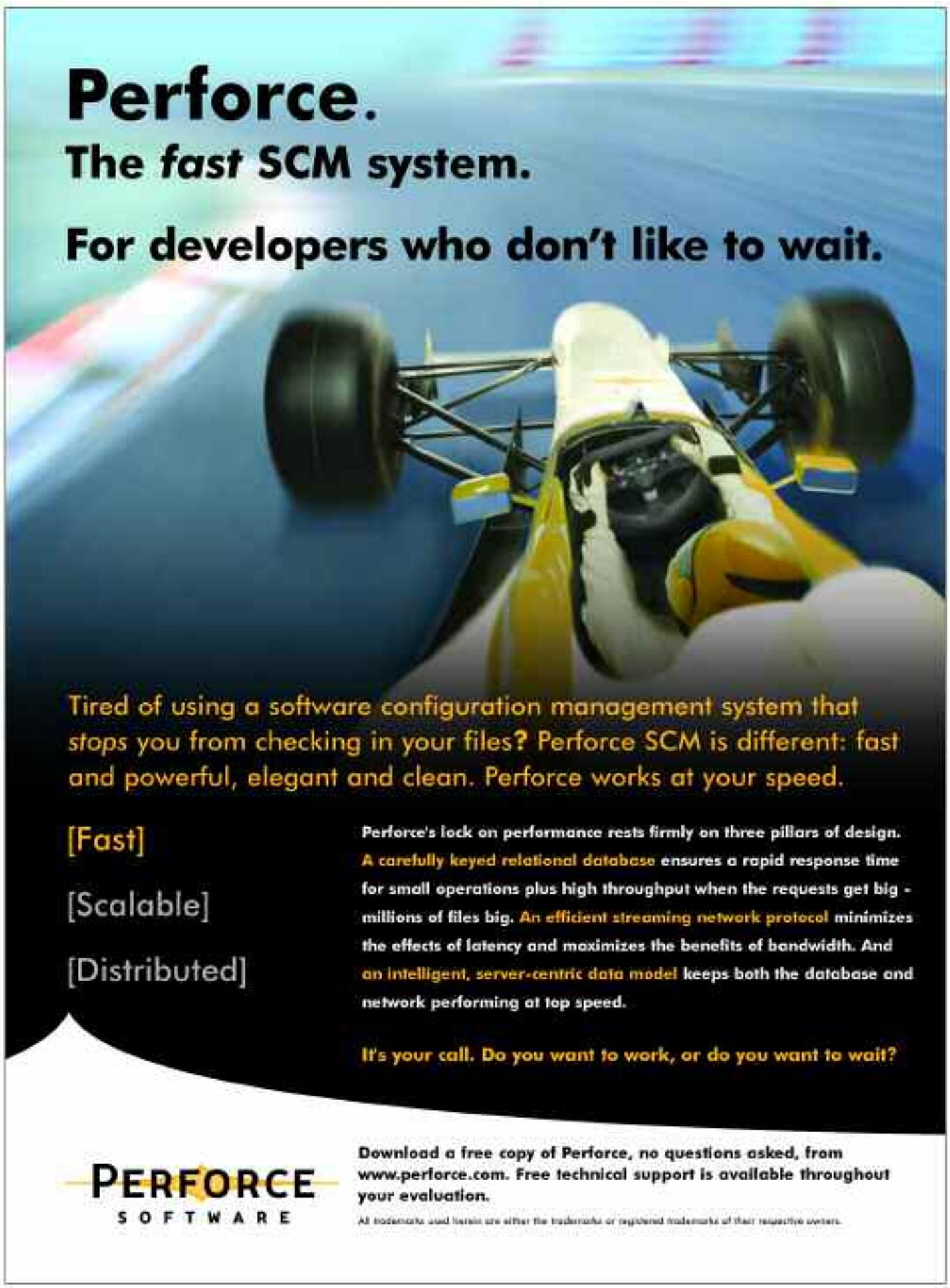
Smith said the engine supports 15 data formats, including Edifact, AL3, XSLT, ebXML, JDBC and COBOL, and said the most popular transformation based on viewings of the online videos is EDI to XML.

GoXML Transform Designer does the mappings under the covers, so developers simply use the Transformation Designer interface to create the transformation.

From a screen split into source and target, developers can select the source, such as EDI, from a drop-down list, select a specific type of transaction definition from a list, and load the definition and an instance of the data into the source screen. From there, a user can navigate through the source's tree structure for repurposing. Then, the target is defined, such as XML. The user clicks on the mapping tag and selects the source root element, and then drags it into the target screen. That completes the mapping, according to Smith.

Further, he said, if an organization wants to move to an enterprise offering, all the mappings can be uploaded from the US$699 GoXML into the TerminalOne production-level transformation server, which can handle 50,000 transactions per minute.

Smith said that with the acquisition of XML Global, Xenos saw a move away from EDI toward XML. "[XML] delivered on the promise of ubiquity that EDI couldn't, primarily because the Internet made it happen." ▮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Synapse Project: Don't Call It an ESB

◂ continued from page 1

Synapse is intended to be an intermediary structure for the proposed Web services standards, such as WS-SecureConversation and WS-Policy. It is as yet unclear what other features will be included in the software, but the developers say that the software will provide a pathway for exchanging information between WS-* compliant Web applications and outside systems.

As an Apache incubator project, Synapse will be under the auspices of the Apache Software Foundation, which will control and hold all development code until a stable release is reached.

Eric Newcomer, CTO of Iona, described Synapse as a mediation project. "Some participants are in the ESB space, some are in the registry space, some are in the Web services management space. It's kind of a hybrid of those kinds of functionalities, providing what's needed for SOA infrastructure."

Dave Chappell, vice president and chief evangelist at Sonic, sees Synapse as a chance to create a common framework for use in the implementation of the WS-* Web services standards. Chappell said the project will likely draw from other open-source projects, like Iona's Celtix project, and that other projects also will be able to take away code from Synapse.

"Synapse itself marks the first open-source effort at creating the next generation in the evolution of SOA infrastructure in that it provides a mediation framework," said Chappell. "The Web services stack of specifications has long since talked about the notion of intermediaries. This represents the first open-source framework dedicated to doing that sort of thing."

But while the Synapse project has some ardent and dedicated supporters, the news of its creation is still premature. The parties involved have not sat down around a table to talk about the project. Chappell anticipated a sit-down would finally take place in November.

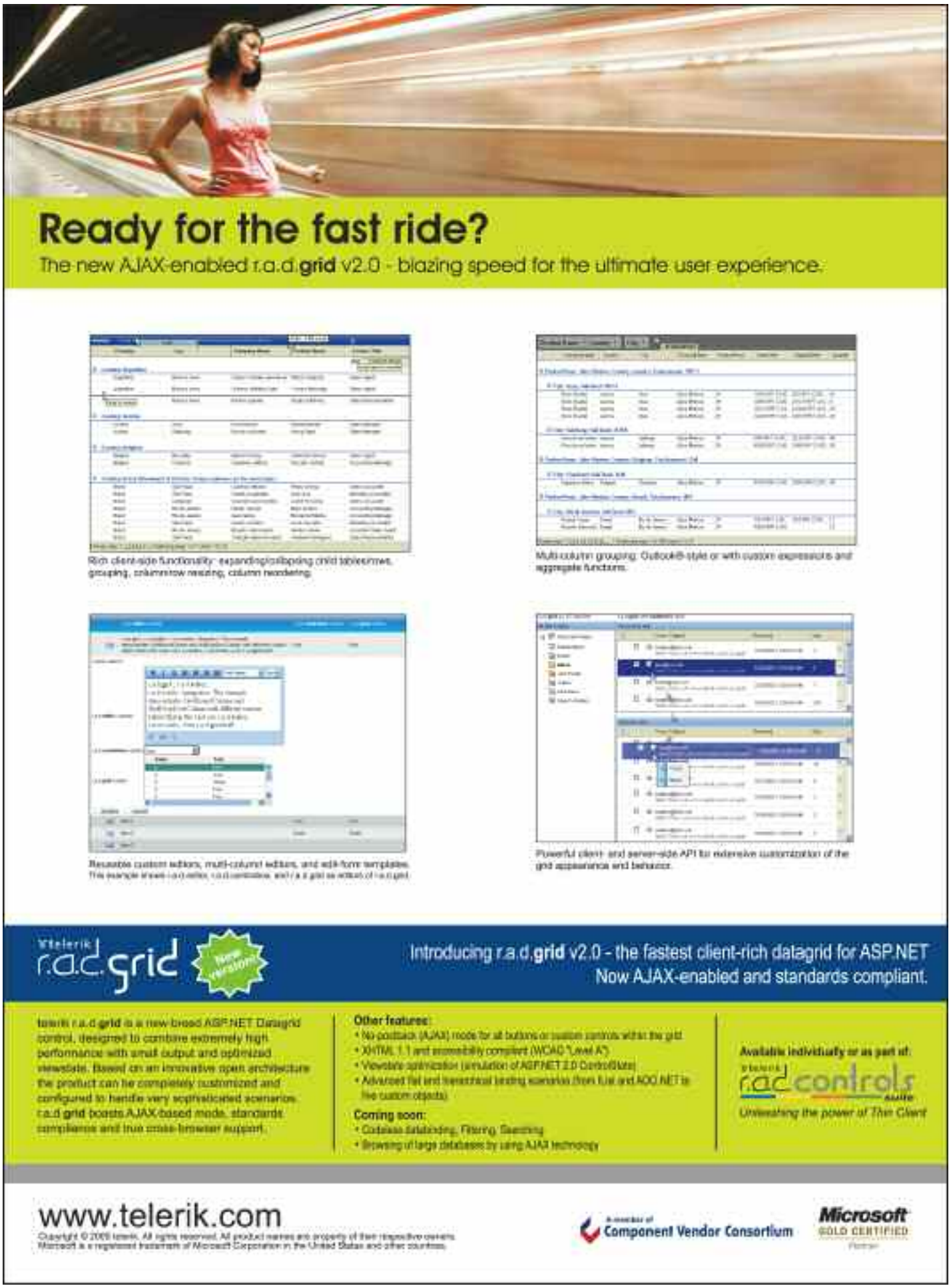
ROAD AHEAD

Understandably, predictions from the participating companies for the project's road map are somewhat disparate.

Newcomer, for example, predicted that Synapse will see a preliminary release before the end of 2005, while Chappell said "that's a reasonable thing to shoot for, but there's only four months left in the year."

Another sticking point is that Synapse sounds like just another enterprise service bus (ESB) in a market crowded with ESBs, including those of companies participating in the project.

"You're going to hear, in the next week or two, [discussion of] whether or not Synapse really is an ESB," said Chappell. "We've decided that Synapse is not really an ESB. It's an enabling technology that may be used for any type of SOA architecture. The intermediary framework for Web services is what makes it smell like an ESB," he said, adding that commercial ESB solutions will offer more. [Synapse] helps [propel] the whole idea of Web services mediation frameworks with the open-source community. ▮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Thinkmap Sees Visual Way to Depict Data

SDK update supports XML, not just SQL and flat file

BY JENNIFER DEJONG

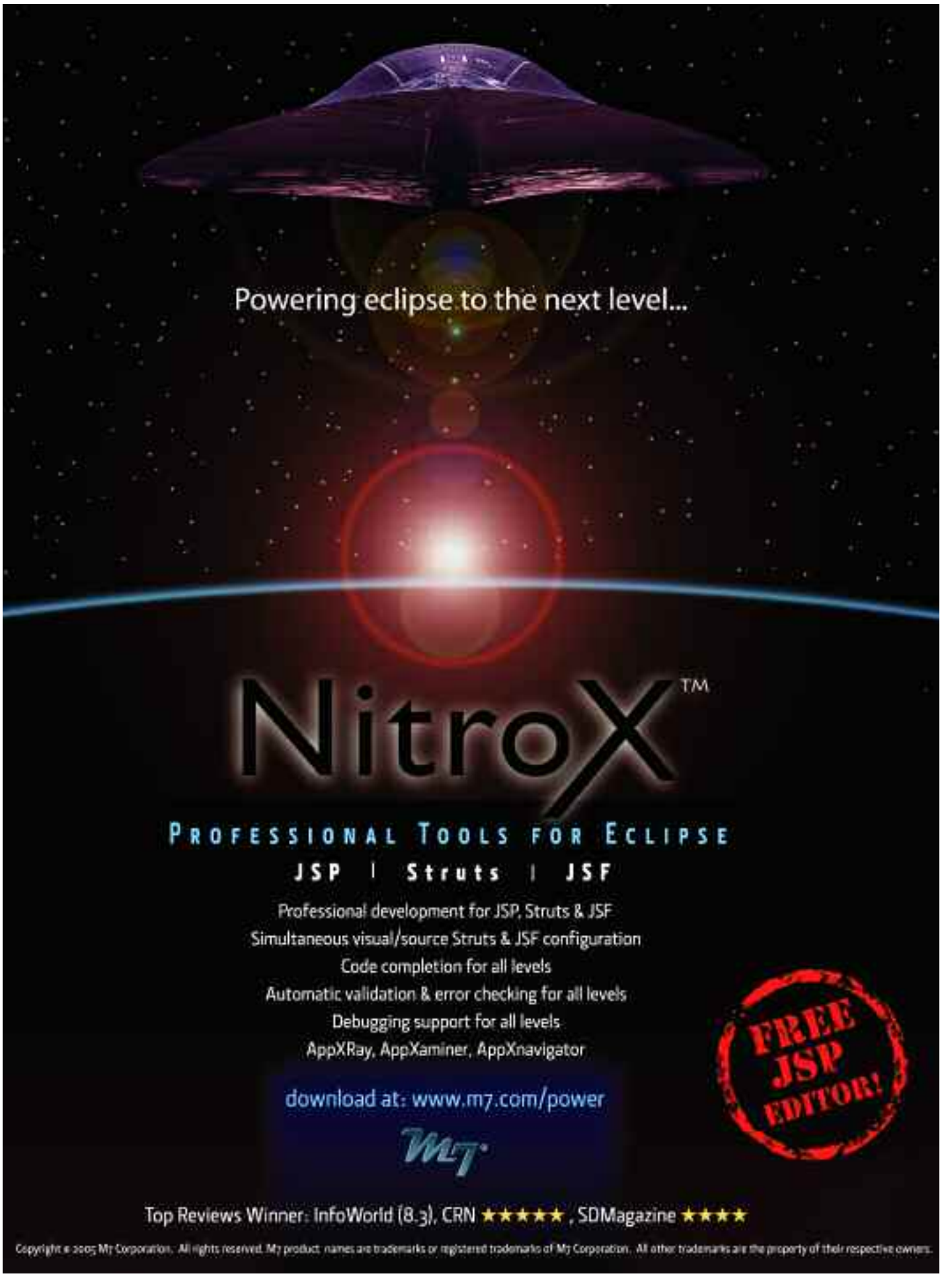
Thinkmap has added XML smarts to its SDK for visually depicting data.

The New York City-based company last month announced Thinkmap Software Development Kit 2.6. The tool makes it easy for developers to visually represent complex sets of interrelated data that are pulled from multiple sources, and add those depictions to applications.

For instance, the tool could depict the relationships—and inter-relationships—among multiple players in a company's supply chain, said Thinkmap CEO Michael Freedman.

Earlier versions automated the processing of connecting to relational and flat-file data sources. Thinkmap SDK 2.6, which starts at US$5,000 per two-processor server, adds support for XML-based data. Developers can link to all three data sources without having to write to the APIs, he said. Also new is the ability to refresh live data, such as stock quotes, without having to click on an update button.

The visual representations of data aren't just static images, Freedman explained. Users can change the view by clicking on different elements within the image. They are built using an XML-based configuration language, which has a syntax similar to that of Cascading Style Sheets and other scripting languages, he said. ■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Quest's Goal: Unifying Its Products

◂ continued from page 8

CIOs and business executives who want a window into how the company's core applications are behaving.

Jewell admitted it won't be an easy sell. "You can't close that deal without sign-off from both parties." That's a big change from how Quest sells its individual product offerings today. "There is no proof of concept needed for Toad," he added.

Jewell declined to say when Quest will deliver its planned application management platform. "But we are actively improving our portfolio—building stuff, acquiring companies, licensing technologies, to enable integration [among the now separate offerings]."

When asked about competing offerings, Jewell acknowledged that IBM and Microsoft provide "pieces here and there." Both provide profiling tools for databases and applications. But, increasingly, such tools are tied to each company's respective life-cycle development platform, he said. "Quest has never taken a foray into pure application development. We are about the application management life cycle." ■

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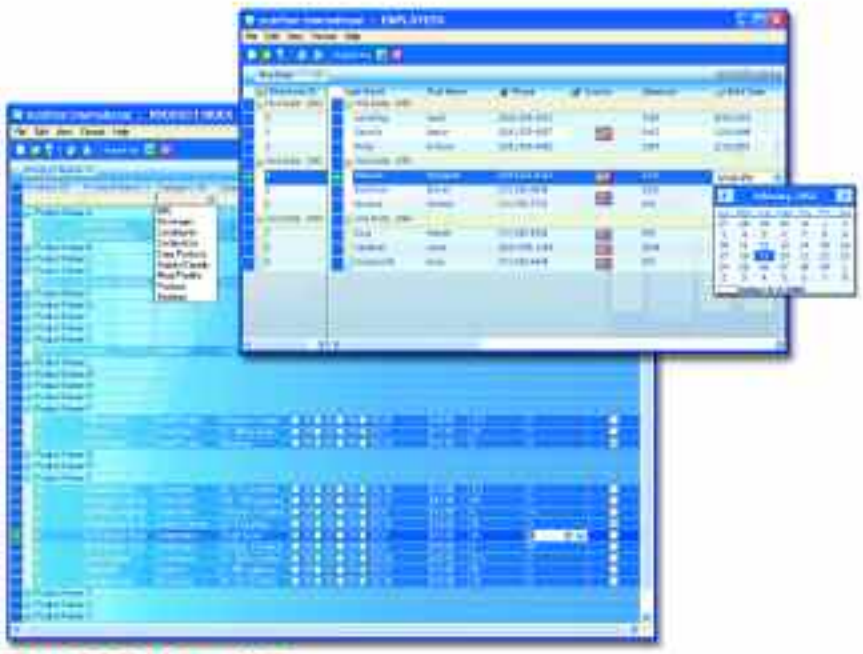

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Accessibility Calls for Good Planning From the Start

◂ continued from page 5

proper accessibility implementation is good planning right from the start.

"Some of the steps may put [developers] in a position of a total rewrite," said Snayd of the steps involved in making a program accessible. "One of the things you really have to do is start with a policy, which has all of the developers using the same rules and the same checkpoints. People may say, 'That's IBM; that's how they do everything,' but we've found this is the way to do it."

As in conventional development, Snayd continued, developers have to make decisions about who their application is for and what it has to do. "Is it for users with mobility impairment? In which case you may want to limit the things that require simultaneous finger movements," he said, adding that some platforms offer more to help make accessibility programming easier, such as Windows, Java Swing and Eclipse.

"There are [also] lots of helpful checklists and things on Web sites, setting out what the objectives are," Snayd said. "You have the business objective; now you have to decide if you will address all people, or just some people. A product for the blind, or for the deaf? You have to pick an API that works. If you haven't picked an API that these access vendors can map to, you put a lot of work and energy in for naught."

GOOD BUSINESS

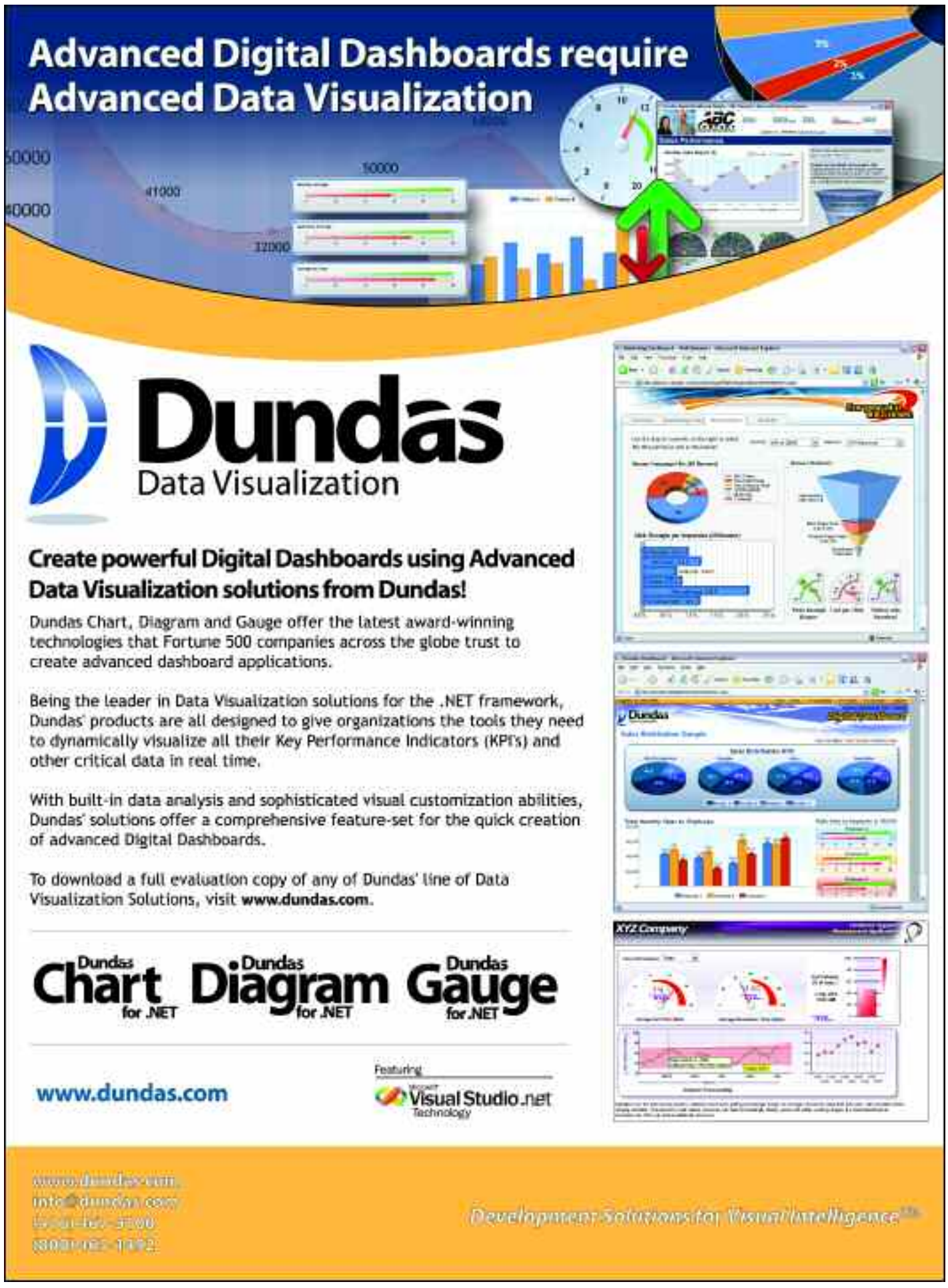
While Snayd, Korn and Haverty each have different ways of dealing with accessibility implementation, the one thing they can all agree on is the fact that making software usable by the handicapped is simply the right thing to do. While the monetary incentive from possible government contracts, which require accessibility for all workers, is great, making programs usable for all kinds of people is just good business in general, said Korn.

Despite his disability, Melonson considers himself fortunate; thanks to his experience, using computers is not nearly as difficult for him as it would be to a novice blind user.

"When I was about 5, my dad brought home a Tandy Color Computer 2, back when I could sorta see, and I was obsessed with video games. That branched out into programming because I wanted to write games," said Melonson.

But despite the availability of more friendly software, many tasks still require blind users to have specialized knowledge and experience. Melonson is a programmer and a technician at a local college, and due to a lack of usable tools, he relies on his short-term memory to make his tasks easier.

"Usually I turn off the screen reader when programming," he said. "I'll use a Braille display if I can get my hands on one. They are very expensive. I wouldn't say it was considerably more difficult, as long as you know what you're doing." ▮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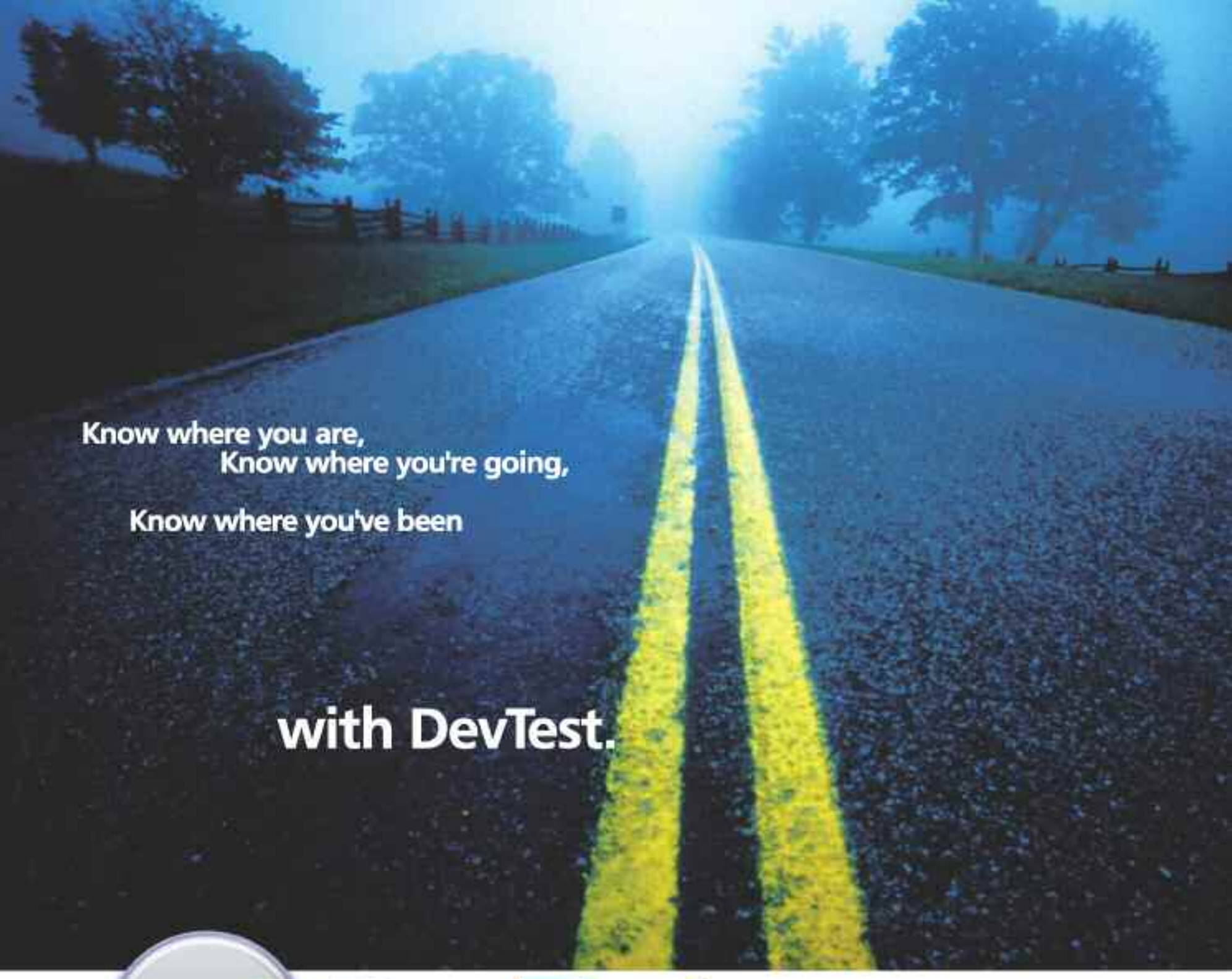

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Study: Pricing Key to CM System Success

◂ continued from page 3

rename directories. Should have notification built in for when disk space is running low. Should make it easy to set up a project," said one individual.

"Vendors need to take great care to identify impacts of updates to their code on users. Very important that ease of use be thoroughly tested," said another. A third complained, "Change management should be user friendly and intuitive; too much time is wasted entering change management parameters in poorly designed system."

THINKING ABOUT DEFECTS

In the same study, slightly more than half of developers, or 50.8 percent, said that their team used a commercial bug- or defect-tracking system, while 47.9 percent said the team used an in-house system.

Not everyone is even that organized: Three out of 10, or 30.1 percent, used Microsoft Excel to track bugs, defects or issues, and 16.5 percent said they used yellow sticky notes. Also popular were whiteboards, at 15.4 percent.

Just as with a configuration management system, cost is paramount with a bug-, defect- or issue-tracking system. Respondents were asked to rank 18 features on a scale from 1 to 4, in terms of their importance when evaluating this type of solution. The most important criterion, with a mean response of 3.36, is "low maintenance costs," followed by low price per seat, at 3.23. Next up were "tracking system features" and "e-mail notifications," tied at 3.11; and "management reports," at 3.01.

One respondent explained his pricing concerns: "An issue is per seat cost when we use the same system for internal and external users. We could have hundreds of external users, but fewer than 30 internal users. We don't want to pay the large licensing to support that many external users."

Anther developer commented, " I haven't yet seen an affordable third-party system that can report on the statistics I need. Perhaps I've not been exposed to the right one yet." Another agreed: "There should be flexible ways to categorize bugs, implement a bug file-to-fix process, and generate aggregate reports and charts on things like incoming rates, fix rates, etc."

The least important criteria from the list provided were integration with debugging tools, at 2.50; support for outsourcing and external team members, at 2.47; integration with requirements management software, at 2.39; and cross-platform server software, at 2.36.

What seemed to be important for many who participated in the study is that they remain in control of their processes. "We want (and have) a system that supports a variety of development processes, not just bug tracking. It is very important to have an issue tracking/process management tool that is tightly integrated with SCM and allows us to implement *our* processes in the tool, not force us to accept some vendor's one-size-fits-all process," was a typical comment. ■

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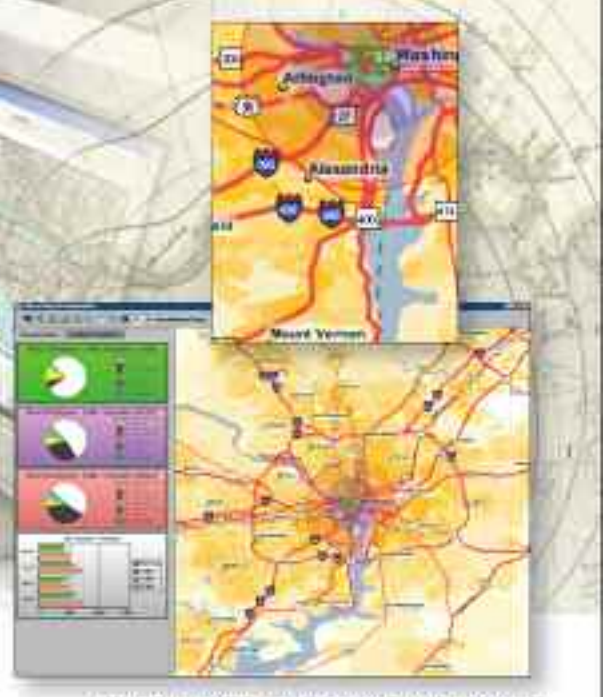

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EclipseWorld Showcases Dependency Tools

◂ continued from page 1

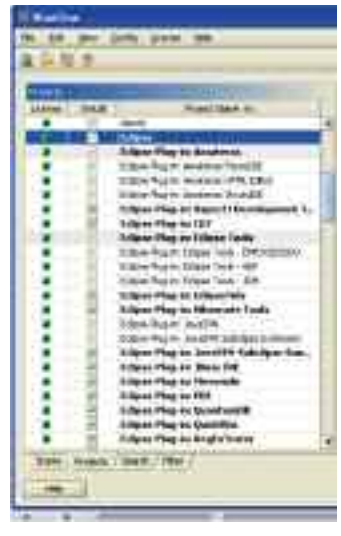
vice provider **OpenLogic** unveiled an Eclipse-based starter edition of its BlueGlue infrastructure management system. The kit comprises the Eclipse 3.1 IDE and 27 preintegrated plug-ins, including Struts Box, the Web Tools Platform, AspectJ and C development tools, Hibernate and Visual Editor.

According to OpenLogic CTO and founder Rod Cope, the plug-ins are fully functional and preconfigured to work together seamlessly. "This kit is a sort of teaser for our full services," he said, which include tracking issues to help companies using open-source software to stay up to date and running smoothly. "We take care of dependencies, updates and documentation. We also run hundreds of tests to make sure everything runs end-to-end across the infrastructure."

Also tracking dependencies is Lattix LDM for Eclipse, the debut product from **Lattix**, a 2004 start-up based in Andover, Mass. Lattix LDM is intended to help software engineers improve the quality of complex systems by presenting box-and-arrow visualizations of entire architectures of those systems, explained Frank Waldman, Lattix's co-founder and vice president of sales. "Without boxes and arrows, you can't understand a complex system," he said.

To analyze and illustrate complex systems, Waldman said, the tool employs Design Structure Matrix (DSM), a decades-old technology that gained notoriety in the 1990s when it was used by the Massachusetts Institute of Technology to model complex processes at Boeing, General Motors and Intel. "Lattix is the first to apply [DSM] to software systems," he claimed. Once a dependency model is created, "you can then design rules based on those dependencies," he said.

EclipseWorld, organized by SD Times' parent company, also saw the approval of the Data Tools Platform project, a top-level project proposed in February by **Sybase**. According to Raj Nathan, senior vice president of the information technology solutions group at Sybase, the project will permit Eclipse to be extended to better serve developers building data-driven applications. "We will enrich the framework with data modeling, a SQL Viewer and a standardized way to access data," he said. The project will be led by Sybase, IBM and Actuate. ▮



OpenLogic's BlueGlue scans the host system and presents an inventory of managed modules and their dependencies.

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Sybase to Release Jasper This Year

Next SQL Anywhere edition keeps availability high, response times low

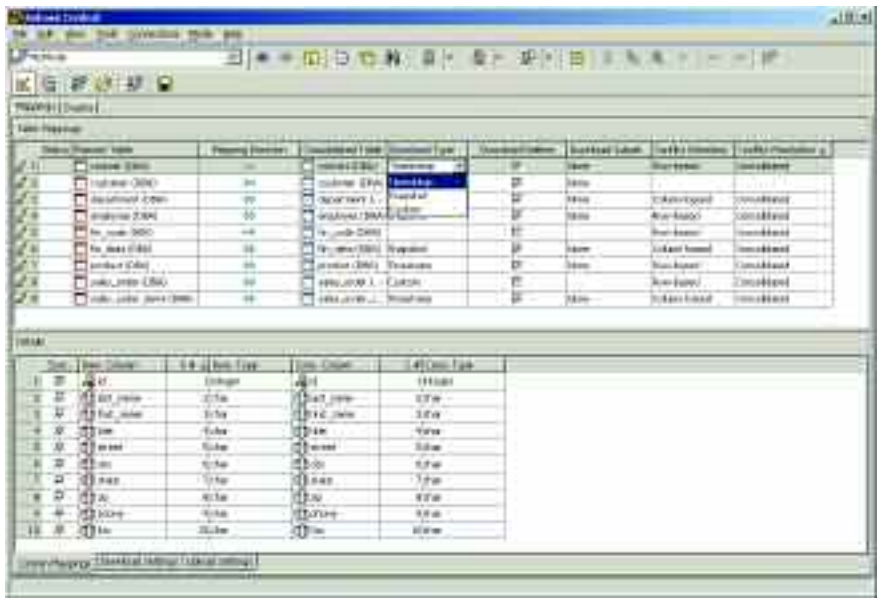
BY EDWARD J. CORREIA

Sybase mobile software subsidiary iAnywhere Solutions in late August unveiled Jasper, the code name for the next edition of its SQL Anywhere data management and synchronization solution for mobile devices that it claims will include failover capabilities through server mirroring.

The company demonstrated a pre-beta version of the software at its annual TechWave User Training conference in Las Vegas. The software is scheduled to be available by year's end.

In addition to support for Symantec's Veritas clustering software, Jasper will provide a three-server mirroring solution: One server mirrors another while a third server acts as an arbiter. "That [third server] would recognize when your primary server goes down and automatically switch over to the secondary server, which is up to date with the database transactions," said Chris Kleisath, Sybase's senior director of engineering. According to Kleisath, mirroring requires no special software or hardware. "You can even mix and match operating systems," he claimed.

SQL Anywhere's next edition also will add materialized views, a feature similar to stored queries that Kleisath said permits developers to specify and store precomputed query results. "This enables much quicker access to complex kinds of reports that you might know in advance that would occur," he said. The feature also can be used for ad hoc queries.



iAnywhere's MobiLink graphical tools let developers create, test and deploy synchronization applications using wizards.

Sybase also has added tools aimed at increasing developer productivity and removing performance bottlenecks, Kleisath said. "We've added a bunch more monitoring [and other] kinds of tools to help developers pinpoint performance problems within their applications," he said.

One such tool, he said, is helpful for pinpointing problems with the way applications access the database, such as with contention or concurrency issues when multiple users are trying to hit the same database row at the same time and everybody gets blocked up waiting for one user to commit a transaction.

"The tools we've created will help application developers pinpoint those kinds of areas to see what's causing performance problems and be able to enhance their application to get better performance." Testing and monitoring tools also are presented in a simpler interface, Kleisath said.

Sybase also demonstrated at TechWave a new graphical interface for setup, testing and deployment of database synchronization applications for MobiLink, the company's bidirectional sync engine. "The interface makes it easy to set up and test a deployment of synchronization systems based on MobiLink," said Mike Paola, director of product management at Sybase.

General availability of SQL Anywhere for Windows servers is scheduled for the first half of 2006 with a Linux version to follow; a version for Unix will be released if there's enough demand, Kleisath said. Beta testers can register at www.ianywhere.com/sqlanybeta.

UNWIRED UPDATES

Also at TechWave, Sybase released Unwired Accelerator 7 and Unwired Orchestrator 5, the latest versions of its environments for creating and deploying SOA and composite applications to mobile platforms.

According to the company, Unwired Accelerator now includes wizards to help automate the mobilization of apps written for systems from SAP, Business Objects, Remedy, Application Builder and for Research In Motion's Blackberry devices. Unwired Orchestrator now is fully integrated with WorkSpace, Sybase's Eclipse-based development tool, includes a Java EE-based business process engine, and supports Java composite services via BPEL4WS orchestration. ▮

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TimeSys Hooking Up Developers

BY EDWARD J. CORREIA

Linux developer TimeSys in late August unveiled LinuxLink, a program that it claims will keep embedded developers up to date with the latest software, components and information from board makers and open-source communities about target boards based on ARM, Freescale, Intel and MIPS.

The program, which starts at US$3,000 per target platform, builds on TimeSys' OnBoard program launched in March, under which the company compiles a ready-to-run Linux distribution—including a root file system, board-level drivers and TimeStorm, its Eclipse cross-development environment—based on the custom distributions sent in by participating board makers.

"This product came out of our OnBoard partner collaborations," said TimeSys CEO Larry Weidman. "Our semiconductor partners pushed us to get this out the door as a strategic initiative. It's a way to better service embedded Linux developers who are creating their own versions of Linux."

The LinuxLink program (www.timesys.com/linuxlink) includes access to a continuously updated repository of GNU/Linux components pre-ported to the appropriate target; vendor-optimized board support components; updates from open-source embedded projects such as busybox and dropbear; Linux- and Windows-hosted cross-development and optimization tools; plus mailing lists, bug tracking and documentation, a knowledgebase and other developer exchange forums.

"This is a way for embedded developers to receive a continuous flow not only of information," said Weidman, "but the latest Linux technology and code from developers, as well as to be updated and kept current on hundreds of open-source projects we monitor on an automated basis." ▮

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The Future of Embedded

Tool makers turn from bells and whistles to focus on giving

BY ESTHER SCHINDLER

Embedded system software is complex, software-driven devices are ubiquitous, and the gizmos often need to talk to each other, making the job of an embedded system developer increasingly more difficult.

Fortunately, the companies that supply developers with their tools are fully aware of the increasing challenges, and they're promising to address those frustrations with their upcoming software releases.

Embedded developers need visibility into the source code of underlying libraries and components, says QNX's Roberts.

To some, it would appear that this is a mature market with few opportunities for jaw-dropping new features. Yet, vendors see prominent problems that deserve their attention. Some of these are comfortably familiar: the continuing effort to generate better-performing code, and the never-ending adoption process for new hardware, such as exploiting multicore processors.

However, a couple of trends can be expected in the next generation of tools. For one, there's an increased focus on improving developer efficiency. Instead of stuffing more tools into the IDE, or polishing the chrome on the user interface, vendors are doing their best to provide more capability for debugging and troubleshooting.

There's also more effort put into creating embedded systems that are platform-independent. In a way, that's about developer efficiency, too; developers can spend less time learning about the minutiae of individual platforms, and more time creating applications.

WORKING EFFICIENTLY

Embedded systems are becoming increasingly software-intensive. It's now common for an embedded device to comprise hundreds of thousands, or millions, of source lines. "To speed up the debugging, code integration and optimization of such complex systems, developers often need visibility into the source code of underlying libraries and OS components, even if they're using an off-the-shelf RTOS," said Mark Roberts, director of product management at QNX Software Systems.

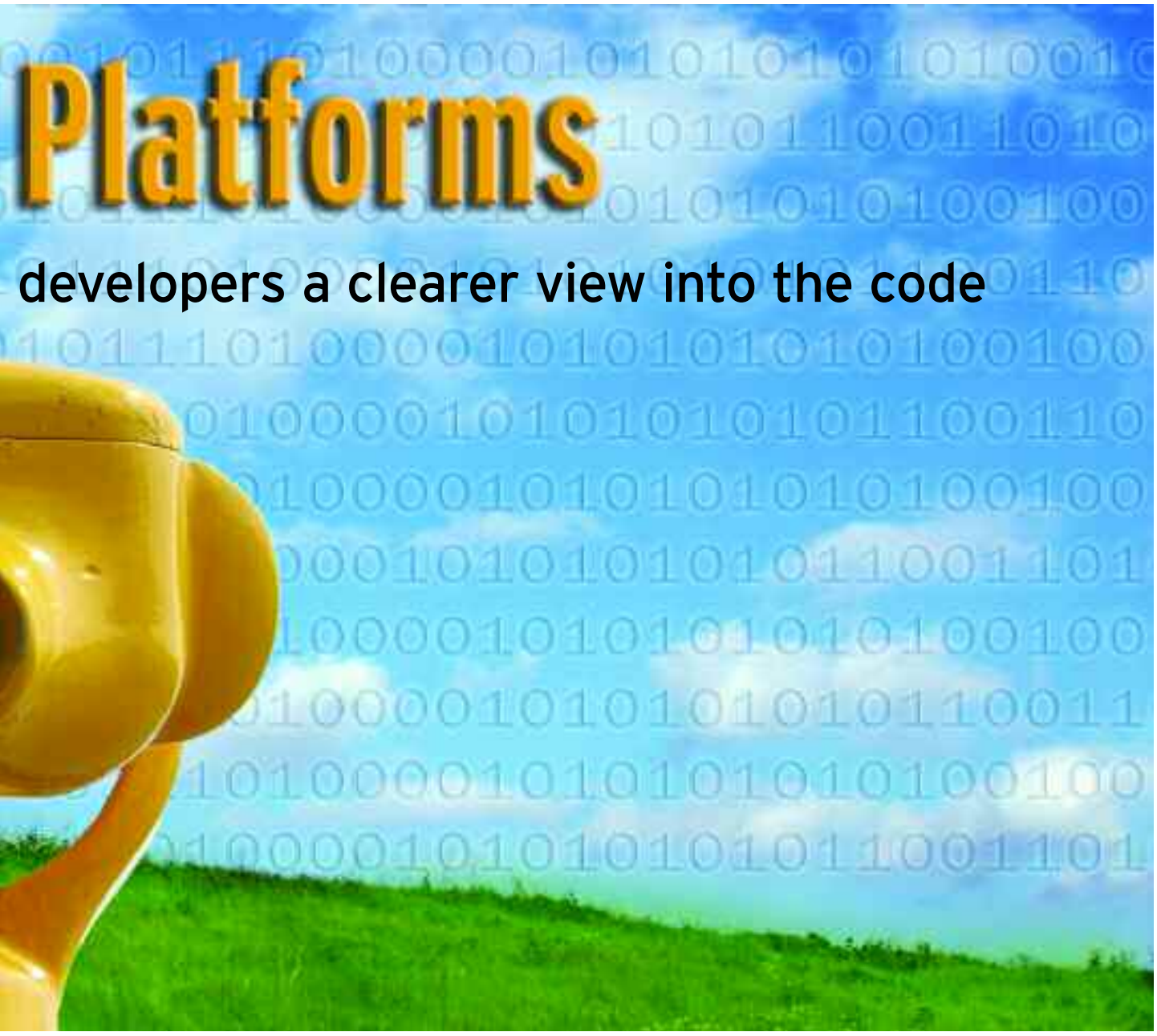
To address that issue, the new QNX Platform Core Source Kit will provide visibility into the source code for virtually all QNX Neutrino system libraries and operating system facilities, according to the company. That promises to make it easier to analyze system behavior for code integration, to quickly pinpoint the causes of unexpected software behavior for faster troubleshooting, and when required, to fine-tune OS components to address the specific demands of their application.

Most platform providers, to some degree, are enhancing the ability of their tools to peek inside the code and help a developer figure out what's going on. Microsoft describes this as "building in greater efficiencies by helping developers organize and distinguish 'what the code does.'"

More specifically, tools are being fine-tuned for the science of turning over rocks to learn what grubs are crawling around beneath. Or you can fine-tune them yourself. While you might think about Java ME first, the newly open-sourced version of Sun Microsystems' Solaris operating system may offer embedded developers such options.

Chris Ratcliffe, Sun's director for Solaris marketing, said that its new DTrace capability "can give developers observability into their systems" to find where the problems are. DTrace lets a programmer dynamically instrument an application that's already in production, and it's used primarily to solve performance problems. Today, DTrace is a command-line tool, but in the next version, Ratcliffe said, "we're creating a visualization API" to make it easier and faster to use.

The streamlining won't be only in the tools but in their delivery. QNX is introducing a component-based model of product releases. Explained Roberts: "Rather than force developers into major upgrades, we will release new features—be they new applications, OS services, protocol stacks, tools or smaller-scale tweaks—as they become available." Developers will be able to integrate



An increasing number of systems have requirements around both hard real time and soft real time, says Wind River's Fanelli.

these new features using their existing QNX environment, and can just as easily "unplug" a feature if it doesn't address their requirements. The release model will apply from the QNX Neutrino RTOS microkernel outward. For example, QNX is implementing a componentized graphics framework to give developers easier access to new 3D APIs (OpenGL ES, for one) and other graphical components.

CAN'T EMBED JUST ONE

Many device manufacturers are looking to multicore processors to address the screaming demand for power, performance and efficiency. They don't need to worry about barriers to adoption; based on the response from the embedded tool vendors, developers will be able to take full advantage of this technology.

One of the highlights of the next release from Enea is a new multicore device RTOS solution that provides coordinated boot and resource sharing across cores. An asymmetric model enables applications to be either fixed to a given core, or deployed to any core in a load-balancing scheme. That's better than SMP, which "load-balances everything," said Michael Christofferson,

Enea's next release will have a multicore device RTOS solution that provides resource sharing across cores, says Christofferson.

director of product marketing.

Enea's new version will feature high-performance intercore communication using Transparent Inter-Process Communications (TIPC) protocol and deployment of OSE, OSEck and Linux across all cores, in any combination.

Wind River Systems also is enhancing multicore chip support, including chip/system bring-up capabilities, the ability to debug multiple context applications (potentially running across multiple operating systems from Wind River and other vendors or open-source communities), and finally, multiple-processor/cores running over network or backplane interfaces.

The new QNX Neutrino *x*86 runtime kit will auto-detect a system's hardware, according to the company, just as a modern desktop operating system does. "The kit also provides intuitive displays that let end users quickly choose from a variety of installation options," said Roberts. "As a result, independent software vendors, system integrators and their customers can take the QNX Neutrino RTOS out of the box, install it, load their applications and go. No time lost fussing with start-up code, board support packages or arcane configuration issues." QNX also is developing a large transactional file system; its QNX graphics framework intends to maximize utilization of available hardware by supporting advanced features of graphics chips.

Better hardware utilization won't stop after the software leaves the quality assurance department. Sun's Ratcliffe said he expects the predictive self-healing framework in OpenSolaris to aid embedded developers. "We can predict when memory will fail and take it offline before it causes a failure," he explained. "It'll be amazing to see what open-source developers can do with that."

PICK A PLATFORM, ANY PLATFORM

One clear trend is toward operating-system agnosticism. Sure, you can find exceptions. Microsoft's Mike Hall, technical product manager for Windows Embedded, said the next version of the .NET Compact Framework will "[reduce] the OS image footprint, reducing dependencies in the development process to allow developers to build leaner, meaner devices." But most vendors are taking a United Nations approach to operating systems and platforms: We'll talk to everybody, and we'll help everybody else talk to everybody.

They have to take that attitude. As Wind River's John Fanelli, vice president of product planning and development, explained, "A growing number of systems have requirements around hard real time and soft real time. Often, to meet these requirements, devices are made of a [series] of devices. For example, a robotic system may have a device component such as a user interface that requires soft real time, and mechanical control component that requires hard real time."

As a result, Fanelli said, device designers are considering systems that leverage multiple operating systems. The operating system makers follow suit. Wind River provides platforms based on both VxWorks and Linux. Fanelli added: "By including a messaging architecture based on TIPC, Wind River enables the interoperability of these heterogeneous systems."

Enea also is doing its best to improve interoperabilty in its next release. The application frameworks for complex distributed systems are middleware that provides, the company says, publish and subscribe services, distributed logging and performance monitoring services, and thresholds. It includes distributed debug services, both Web and command-line-based. The application frameworks also promise high availability, with a UML data model for system configura-

▸ continued on page 30

A Clearer View Into the Code

◂ continued from page 29

tion, using a real-time database to store and access configuration. Among the other features that excite Enea—and, it hopes, its customers—are chassis management, including alarms, health and slot detection and management.

Green Hills is taking a slightly different approach to the operating system issue. "The initiative is to provide a single operating system, Integrity, which scales across all of the requirements that a major electronics manufacturer may have: from the smallest, most power- and cost-sensitive devices [such as an MP3 player] to large, multiprocessor embedded systems [such as a network switch or router] to secure servers and workstations," said David Barnett, director of product marketing.

One major benefit that he feels will cause developers to say, "Cool!" is the ability to run unmodified software originally written for other operating systems on top of Integrity. That's being accomplished, Barnett said, by allowing other operating systems (including Windows and Linux) to run as "guest" operating systems, with secure virtualization. It is also adding standard interfaces, such as POSIX and Linux, to Integrity so that existing applications can be recompiled without requiring source code changes.

Whatever operating system is used, the devices need to communicate with one another. Wind River says it's managing complexity across multiple devices and operating systems by providing the capability to scale features, footprint and performance based on the target device. It is also providing device, processor and peripheral support for power management in a complex multicore/multisystem environment, compatible with a multi-OS environment.

Enea is putting a big push behind TIPC technology. The high-performance message passing protocol, the company says, is platform-independent, supports any media and any network topology, and has location transparency (that is, the sender requires no knowledge of receiver location). It has application/connection naming services; dynamic discovery of remote applications and connections (that is, dynamic discovery of network topology); and support for fault tolerance. The IPC capability scales from 32-bit CPUs to DSPs, claims Enea. It will be available on OSE, OSEck and Linux and can be ported to other RTOSes.

Do you notice what's missing? Few platform makers crowed about the hot new features in the tactile portions of their upcoming products; most enhancements are in infrastructure and discovery. Nobody thinks that developers will swoon over a new drag-and-drop interface or imagines that they're yearning for another blinking light. Instead, the companies are promising that the next iteration of their tools will provide better interoperability and more effective binoculars into what the code is doing. ▮

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Bob Jenkins
Senior Product Marketing Manager, CollabNet

Bob Jenkins is a senior product marketing manager at CollabNet, the leading provider of on-demand distributed software development solutions. Jenkins has spent the past nine years focusing on software application development life cycle tools. For the past four years he has worked for CollabNet as a sales engineer, a principal collaboration consultant, and in his current marketing management role. Jenkins helps define the product vision for CollabNet Enterprise Edition, including CollabNet Subversion, the CVS replacement designed for distributed configuration management.

Jenkins has 20 years of experience in software development and application customization. Prior to CollabNet, he worked for Rational Software, where he concentrated on configuration and change management.

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EDITORIALS

A Plum Purchase

BEA Systems' surprise announcement that it had agreed to purchase portal maker Plumtree Software makes a lot of sense, because portals play well to BEA's strength. The WebLogic product family, such as the application servers, integration software and data managers, play well in environments that require aggregating data and information, both for human consumption and for creating reusable services (for what's now called a service-oriented architecture). While BEA already had a well-respected portal offering, Plumtree extends and deepens BEA's reach, particularly into the .NET space.

That's not to say that BEA is getting a bargain. Since going public in late 2002, Plumtree had traded within a relatively narrow space, seesawing in a range between US$2.00 and $5.80 per share; for the past year, it's been $2.90 to $5.60, more or less. BEA's buyout price of $5.50 in cash per share, for a total of about $200 million, is at the high point of that range. That implies that BEA leader Alfred Chuang sees a lot of potential synergy between Plumtree's enterprise portals and BEA's offerings, such as the new AquaLogic data management servers.

The impact on most enterprise application developers from this consolidation should be minimal; it's unlikely that BEA's purchase will kick off a land rush to drive more acquisitions, or will inspire the other major players to rethink or re-emphasize their portal strategies. However, it does reiterate that portals, despite being an "old" buzzword from the early 2000s, remain relevant; one of the most important uses for enterprise applications and SOAs is to connect people to information. While SOAs can help provide the plumbing and manage the workflow, it's portal technology that pushes the data out to the executives, managers and employees who can turn information into actionable business intelligence and enhanced productivity.

Next Steps for Eclipse, EclipseWorld

The first annual EclipseWorld conference, held at the end of August in New York City, was a success. With more than 500 attendees, the event demonstrated that an independent conference can be very successful in offering training and technical information to the open-source Eclipse community.

Noteworthy at EclipseWorld was the breadth of topics that IT professionals and software developers were interested in. One of the most popular classes, for example, was one that taught how to build commercial-quality plug-ins to Eclipse. Among the least attended were courses on using Eclipse to build Web applications with languages like Python and Perl.

Also popular: Sessions on BIRT, the Business Intelligence and Reporting Technology; and on RCP, the Rich Client Platform. Both of those topics demonstrate that Eclipse has evolved past its origins as a Java IDE, and now represents a runtime platform, as well as a tool chain for software developers. It will be interesting to see where Eclipse goes next.

In one regard, we know that the destination is New England. Mark your calendars for EclipseWorld in Boston, Sept. 6-8, 2006. ▮

Platform Specific

Editor's note: The following column appeared in the Aug. 18, 2005, issue of News on Thursday, an e-newsletter published by SD Times.

Zeichick's Take

A long time ago, in a galaxy far, far away, I designed and coded mainframe applications in COBOL. And Fortran. And PL/1. Sometimes there was a little RPG thrown in for good measure.

As a developer and systems analyst, I had a worldview that was rather narrow, focused mainly on the problem domain, but also with a heavy dose of the fundamentals of software development and of the programming languages that I used. What I rarely thought about was the runtime platform, beyond the peculiarities of the Fortran G and Fortran H compilers. Even when I wrote software for 3270-series terminal users, the amount of knowledge required was easily acquired. I could port my code to other systems, and indeed occasionally I built software for VAX, Data General and other minicomputers, in addition to my comfortable System/370.

As a programmer, my tool was the programming language, and maybe some common libraries. It was all very portable, and had little to do with specific companies or products. Even in the mainframe world, IBM was little more than a nameplate on the box.

Twenty-five years ago, I considered myself a crackerjack Fortran, COBOL or PL/1 programmer, as well as a systems analyst experienced with IBM's big iron. Programming languages defined me as a developer, because in that era, the runtime environment was largely abstracted away.

Times have changed: At conferences like Microsoft Tech-Ed, JavaOne or LinuxWorld, it's all about platform internals. That's particularly true at the Microsoft and Linux events, but holds true in the Java universe as well. Dive deep into the Microsoft Foundation Classes, or the Java EE 5 packages or the .NET Framework. Master the art of ASP.NET coding, or become an expert on Red Hat packages. It's not about the language; it's about the runtime. And the runtime's manufacturer.

Even when languages are mentioned, they're in a vendor context. When someone refers to herself as a Visual Basic or C# programmer, she's telling the world, "I'm a Windows developer." If she calls herself a Java developer, she's probably not promoting her language skills, but rather her mastery of the specific Java Standard Edition or Enterprise Edition specifications, like JDO, JAX-RPC, JSP 1.2 or JDBC 3.0. If someone programs in ABAP or PL/SQL or T-SQL, you know which brand of software their employer uses.

Those ABAP and JDBC and .NET skills are necessary, of course. But they aren't very portable. A C++ developer for Linux would have trouble getting up to speed on Visual C++ for .NET, and vice versa. A Java SE expert would have to work hard in order to become a native .NET expert, and vice versa. Even moving skills between different runtimes of the same platform, WebSphere and WebLogic, or SQL Server to Oracle to DB2, is nontrivial.

We've gone from a world of portable programmers, whose tools were languages defined by researchers and standards bodies, to a world of platform programmers, whose tools are vendor-specific APIs. I can't help but feel that something's been lost during this transition. ▮

Alan Zeichick is editor-in-chief of SD Times.

ZEICHICK'S TAKE: READERS RESPOND

In his "Take" of Aug. 18, Alan Zeichick wrote, "We've gone from a world of portable programmers, whose tools were languages defined by researchers and standards bodies, to a world of platform programmers, whose tools are vendor-specific APIs. I can't help but feel that something's been lost during this transition."

Here! Here!

Imagine the problems we have been asked to solve as a desert. Each problem-solving domain is an oasis in that desert. In the "old days," there were few oases, and you traveled to them on your hands and knees. But once you got there, you could use the trusty fold-up shovel in your backpack. You were then able to get yourself a drink.

Nowadays, there are thousands of oases. But to get to the water, you have to assemble the five-story high drilling derrick. By hand. Oh, and by the way, the requirement now is to get enough water to satisfy a city.

We wish for the day when the drilling equipment is efficient enough to deliver a city's worth of water, yet can still be carried with you in your backpack.

Kevin Nechodom
University of Utah
Performance Monitoring & Improvement

Mr. Zeichick's article raised an interesting and important question. Has something been lost? If so, what is it?

I wrote my first computer program in 1961, and so have seen up close and personal the change in focus from general software engineering skills to specific and detailed knowledge of a particular platform. Early in my career I learned Fortran and COBOL, but also Algol, IPLV, Lisp and any number of assemblers, working across a number of mainframe, mini and micro platforms on a variety of different problems.

As time went on, I added database to my toolkit, and have worked with dBase, Access, Focus, Oracle, Sybase and SQL Server. More recently I have worked in Basic, C, C++, Java, SQL, OS/2, Windows, Solaris and Unix. I probably have a breadth of experience that a younger person could never attain, as the myriad of platforms have settled down to those few that survived in the market.

At present, I mostly work with developers who weren't even born when I wrote my first program, and I have seen firsthand what has been lost. Developers who become experts on one platform mostly don't have a clue about what is general to all platforms versus what is specific to one of them. I have observed that such developers

tend to overuse their advanced and specific knowledge of their favorite platform to produce software that is needlessly esoteric and complex. I have observed that they have a hard time resolving some of the bugs that crop up when their systems go into production. As a bit of a generalist who has developed a larger point of view, my role has become, more and more, the guy who can "put a fence around" problems that the younger people cannot grasp. The idea seems to be that the younger people do a better job of applying the "patterns" to develop new software that is needlessly complex, but the reality is that it is often up to older guys like me to fix it when it does not work.

I use tools now that were undreamed of when I started in this business. I can do in a day what used to take months. But the scope of what I am asked to do has expanded apace with my ability to do it, so it has not gotten any easier. It seems to me that any young person who only learns one set of tools is going to be obsolete in three to 10 years. Learning the details of one platform is much less important than learning how to be successful without knowing all of these details. Does the job market recognize this? For the most part, no!

Carter Allen
PB Farradyne
A Parsons Brinckerhoff
Quade & Douglas company

Mr. Zeichick laments what he perceives as a shift from development for standardized languages to development for vendor-specific APIs. While I share some of his software development background (I wrote my first programs in the mid-1970s), I do not share his lament.

Those standardized environments of which he speaks still exist and, in many cases, are still vibrant. There is a standard C++ language with standard libraries. There is a C# standard. It is still quite possible to build applications using only the capabilities abstracted through the language and the libraries. People build highly portable applications all the time.

The problem, of course, is that such highly portable applications wind up reimplementing an application-relevant subset of the richer nonportable APIs provided by platform vendors. Unless they're writing applications strictly limited to basic file and string manipulation, their applications need more than the core language and standard libraries provide. The C++ Standard Template Library doesn't include GUI functionality, nor does it provide for manipulation of XML, nor does it handle databases, or RPC or SOAP or….

It's a matter of using the most appropriate tools for the task at hand. Twenty-five years ago, there were no graphical applications, there was no XML or any other "standard" for representing structured data. Relational database technologies were still research toys. Hierarchical, navigational databases were the order of the day, when a database was used; more often than not, applications simply relied on ISAM-type access to stored data. ISAM was sufficiently simple-minded that it could be abstracted into a language (see COBOL). You only had a hammer, but you were lucky in that all your problems really were nails to be driven.

The computing industry has spent 25 years building taller and taller giants of software technology just so we could stand upon their shoulders in building our new applications. Mr. Zeichick laments that we no longer stand upon the ground. I prefer the view from up here; I can see farther, with less effort and expense. The smartest developers make a decision about where they stand for each application they build, based on the business and technology drivers influencing the project.

(Note: Although I am an employee of Microsoft, I am not speaking on its behalf in any way, shape or form. I am writing simply as a developer with more than 30 years of experience in writing programs. The opinions expressed herein cannot be construed as those of Microsoft; they are mine, and mine alone.)

Jason Zions
Microsoft

WHAT DO YOU THINK?

SD Times welcomes feedback. Letters should include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited for space and style.

Send your thoughts to feedback@bzmedia.com.

Letters to the Editor

ON FAST TRACK

Thank you for devoting attention to software product line engineering ["Moving FAST Forward," Aug. 15, page 38]. Your overview of the FAST process captures the basic ideas well. I would also note that my ideas are really based on work that David Parnas and others (including me) did in the 1970s and 1980s.

David M. Weiss
Director, Software
Technology Research
Avaya Labs

DRINK YOUR KOOL-AID

I'm frustrated! I have been thinking of this ever since your Aug. 1 issue of SD Times arrived, with the Guest View column by Dan Dodge ["Surviving the Maginot Mindset," page 32]. I know this won't make any difference, but I have the time as I wait for my QNX development system to reboot.

I will keep this as short as I can and still make the point. My main objective is to share these comments with Mr. Dodge. You may be the only hope that I have for getting my comments heard by him.

While reading Mr. Dodge's Guest View, I began to nod my head in agreement with most of his observations. For over 40 years I have been using computers and the necessary software to develop applications. I, too, have seen the decline in the quality of computer software. It wasn't until I reached the end of the Guest View that I learned who Mr. Dodge is.

I thought, "Oh my! Why doesn't Mr. Dodge's product live up to his expectations?"

I have been using the QNX real-time operating system for the past 12 years. Life was simple 12 years ago. A major project was saved by converting to the QNX RTOS, and we have been using QNX ever since.

However, I now get frustrated almost every working day with the QNX Momentics IDE. I begin to wonder if we wouldn't be better off changing to another RTOS? Then I read Mr. Dodge's review and agree that there may not be any good software out there.

Thanks for listening. Please let Mr. Dodge know that I agree with his views.

Mike Bennett
Senior Software Engineer
Harsco Track Technologies

Scripting Languages In Decline in EMEA

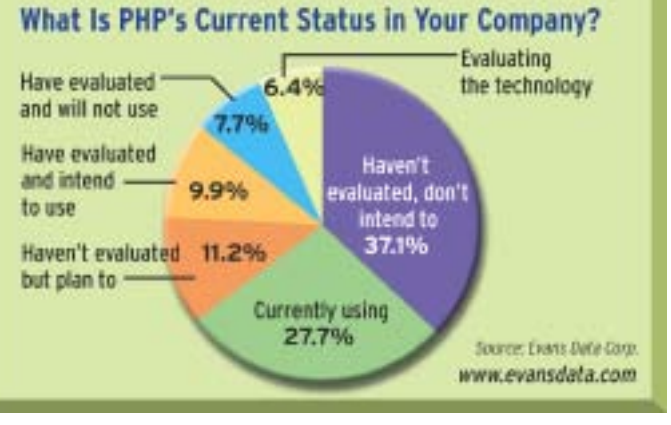
DATA WATCH

Use of the PHP, Perl and Python scripting languages is in double-digit decline in Europe, the Middle East and Africa, according to the Spring 2005 Europe, Middle East and Africa Development Survey released last month by Evans Data.

The study, which polled 400 developers in those regions, found that usage of PHP and Python fell by about 25 percent from a year ago, and that Perl's usage dropped by more than 20 percent over the period.

What's more, the survey showed that the number of developers indicating that they would not evaluate any of these languages has risen, by 17 percent for Python, by 20 percent for Perl, and by nearly 40 percent for PHP.

"One of the key factors to this loss of developer mindshare has been the inability of these languages to penetrate the enterprise space," said Evans COO John Andrews in a statement.



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Working on Optimization

Nothing in computing is so captivating as great performance. The first moment you switch from dial-up to cable modem or DSL, or upgrade to a faster workstation, is invariably a moment of true exhilaration. But despite the rush great performance produces and the undeniable benefit it provides to users, software optimization remains a sadly neglected discipline. The pressure on developers to deliver working software is so great, that an optimization pass is a luxury too easily dispensed with.

A second aspect of the problem is that many developers don't really know what to work on to improve performance. The industry really needs best practices for software tuning.

Recently, Intel, whose development products mostly target performance enhancement, published the best practices it has used for the past decade in teaching customers how to tune code (www.intel.com/cd/ids/developer/asmo-na/eng/affiliate/hp/93100.htm). These practices and best-known methods are interesting and, in some respects, surprising.

The first point Intel establishes in its methodology is a refutation of a longstanding erroneous perception: that optimization is an art. Intel argues convincingly that optimization is the result of specific practices, executed assiduously and patiently, in a defined sequence of steps. The practices are applied to a succession of application layers. Curiously, these layers are not the usual high-to-low, which you would expect, but a progression that attacks first the performance profiles that can hide other performance issues.

Integration Watch

The Intel methodology starts with hardware and operating systems: the system issues. Resources are examined, analyzed and compared with needs, and remediated as needed. Then the application layer is attacked. Architecture, algorithms and implementation are all examined and tuned. Finally, the model returns to the hardware, but at the level of individual silicon components. This final tuning cycle particularly targets the processor, and resolves program actions that interfere with the processor's optimal operation.

At each of these three levels, the same five-step cycle of activity is performed iteratively until no further optimization can be reasonably obtained at that level. This cycle, called by Intel a "closed loop" because the last step segues back into the first, starts with collecting performance data. This step involves choosing the right kind of benchmark or workload, running it, and then recording the results in detail.

The second step is to analyze the results and identify the issues they point to. These issues inevitably revolve around hot spots—places in the code where the program spends most of its time, either working or waiting. Hot spots often involve loops or other code blocks that are executed frequently, although other constructs can form hot spots as well. The point of this step is to identify where the optimization process should spend most of its time.

The third step is to generate an alternative to the work being done at the hot spot—a new algorithm, a new data structure or a new construct. This step might be where the "magic" of optimization, if there were any, would appear. In fact, finding effective alternatives is not about magic, but more often has to do with experience. You see heavy disk I/O, you think caching. You see excessive page swapping, you think about better memory management. And so on. The solutions come from similar issues you've seen before. Rarely will you encounter completely new optimization issues.

The fourth step is to implement the change you've designed. The fifth step in the cycle is to run the new software with the new code installed. And this naturally leads back to the first step of gathering data.

By using this top-down, closed-loop model iteratively, Intel contends that most of the performance benefits that can be gained will, in fact, be worked through. The singular benefit of such a systematic approach is that once developers have learned it, they can apply it quickly and effectively and generally boost performance across the board, even on existing software. All that is needed is for managers to give developers the time to put this finishing polish on an application.

Alas, making time for optimization is rare in IT, except when the application provides an identified competitive advantage. The rationale is clear but wrong. The more effective IT makes employees by giving them better performing value, the more it contributes to the company's success. This perspective is even more true at ISVs where product performance is often a key differentiator. So, while optimization as a discipline might not be about wizardry and voodoo anymore, the high-performance software it creates still retains a magical allure. ▮

Andrew Binstock is the principal analyst at Pacific Data Works.

Requirements Gathering

At the center of the design process is the notion of "requirements gathering," but I think the entire notion is misguided. There is no such thing as a "requirement," at least not in the way that most programmers or marketing people use the term. The only real requirement is that the program solve a real problem that vexes real users, that the program provide answers to specific questions about the real world.

When you focus on gathering discrete "requirements," you focus on the minutiae: menu items, dialog-box contents and the like. All too often, the big picture—the problem that you're trying to solve—gets lost and the program is a failure. It doesn't actually do anything useful.

When designing, I think about problem definition, not requirements gathering. If presented with a specific requirement, I always ask: "Why do you need that? What task are you doing or what problem are you solving that would be made easier were that requirement implemented." That, is I focus on the problem itself. The methodologies I use don't use requirements lists. Instead, they use two documents that look more like essays than bullet lists.

First, a "problem statement" defines the user's problem and any solution to that problem that can be expressed in domain terminology. It doesn't describe a computer program; rather, it focuses on the real-world problems of the users. For example, I'm currently working on a system that solves problems associated with secondary-school administration—grant management in particular. The problem statement describes how the grants are administered, not how the program will look. In fact, words like "computer," "system," "database" and "user interface" don't even appear in the problem statement. The audience is a school administrator, not a programmer.

Java Watch

The second piece of the puzzle is "use-case analysis." The use cases define the tasks that the user has to perform to solve the problem you just identified. Like the problem statement, the use cases are defined using the vocabulary of the users, and are written in the context of the problem. They don't describe how you might use a computer program; they describe how you solve the problem at hand. How do grant administrators set up and administer the grants? At the core of the use-case analysis are the activities that the user performs, and the sequence in which the activities are performed. There's even a UML diagram for capturing this information, called an activity diagram.

The use cases, in turn, form the foundation of the program design. Most of the UML—the class diagram, the object-interaction diagrams, and so forth—emerge from the use cases.

So, how do you verify that you have captured the use cases correctly? I do it by mocking up the user interface. That is, the user interface is a central component of the design process itself, providing you with a way of testing the validity of the problem definition and use-case analysis. A UI mock-up is one of the most effective communication tools that you have when you're trying to make sure that the design is on track. Conversely, for a user interface to be effective, it must closely reflect the activities that you identified in your use-case analysis. The use cases and the UI are tightly coupled.

Moreover, the UI provides you with a lot of interesting information about the object model. I see a screen as a composite, where various objects in the system are responsible for providing those parts of the UI that represent their own state. That is, a screen is actually showing you the internal state of several objects, and the organization of the screen can tell you a lot about how the object-model should be organized.

I'm not advocating a Visual Basic style of working. A program is not a user interface with intelligent warts hanging off the widgets. A program is an object model in which some of the objects present their state to the user. The UI should be constructed (or at least populated) at runtime by those objects.

Even my server-based programs work this way. The core application runs in its own server (which I call an "app server," even though it typically doesn't use EJB), and the application tells the Web server what the UI should look like. I usually use custom JSP tags to "attach" pieces of the interface to the objects in the app server. A typical JSF/Struts application, which is usually built using the Visual Basic attach-intelligence-to-controls metaphor, is poorly organized.

There are lots of good books on UIs. I had thought to discuss them this week, but I'm out of room, so I'll continue this subject in my next column by discussing a few of them. ▮

Allen Holub is an architect, consultant and instructor in C/C++, Java and OO Design. Reach him at www.holub.com.

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Blogical Operators

Microsoft is generally not a trendsetter. Occasionally, it is ahead of the curve (the Tablet PC); more often, it is late to the party (most famously with the Internet). With blogging, however, Microsoft has shown an absolute mastery of public relations in the new millennium.

Many SD Times readers still may be unaware of how blogging dramatically alters one's relation to the Web, both as a subscriber and as a publisher.

As a subscriber, it's almost impossible to control one's descent into an echo chamber of like-minded enthusiasts. One interesting cross-link from an already subscribed site, and you think, "Well, this seems like a worthwhile subscription," click, and, next thing you know it, you're subscribed to a couple of hundred blogs.

Of course, if it were the case that every day you were reminded that you were asking for endless variations on a single theme, you'd realize the insular nature of your blogroll. However, the subscription aspect ensures that the majority of your blogroll is silent and invisible on most days. Only when a subject simple enough to be easily decried or applauded emerges does a tempest appear in your virtual teapot, as large numbers "weigh in" on the matter.

Another unfortunate dynamic is that in specialized areas where noteworthy information is hard to come by (say, equipment reviews in the hobby of your choice), the rampant cross-linking that characterizes blogs drowns out substantive pages (actual reviews) with trivia ("I got the box today! I can't wait to try it out!").

This cross-linking is the key to the more important and underappreciated benefits of being a blog publisher: Blogging games the search engines. All search engines have taken to heart the observation in "The Anatomy of a Large-Scale Hypertextual Web Search Engine" (www.db.stanford.edu/pub/papers/google.pdf) that "the citation (link) graph of the web is an important resource." (Smart kids, Sergey Brin and Lawrence Page: I hope they make something of themselves.)

Let me put it this way: My 3-year-old blog has just a few hundred subscribers, and yet it has delivered more contracting leads to me than I've received from 15 years of writing for publication and speaking. For a company, high search ranks are PR victories that pay dividends for months and even years.

A case in point is the recent brouhaha about whether the first Windows Vista/Longhorn virus had been discovered. In fact, the vulnerability was based on Monad, the new scripting shell that's been pulled from the initial release of Vista, and was neither a remote exploit nor significantly different from any other script-based attack.

One way or the other, on the same day that the F-Secure Web site (www.f-secure.com) published "First 'Vista Virus' Found," Microsoft employees Lee Holmes and Alan Barr uploaded their own "Not really" posts and, according to Barr, Holmes "resolved to keep refreshing Slashdot over and over, and jump in when he saw [the allegation] appear." The result was that the story gained the least amount of traction imaginable given the alarmist headline.

A far-lower-profile, but to me equally telling, response happened on my own blog. At a moment when my work happened to ping-pong me among six different computers, Microsoft released an unsupported utility called SyncToy, which I instantly downloaded. The next day I posted that it was "3/4 of a great utility," and expressed my dismay that it didn't autosync on entry into a wireless "lily pad" or synchronize the notes directory on my phone. Less than 24 hours later, Reyna Meenk, SyncToy's product manager, posted to my comments section, saying that my usage scenario wasn't what they'd targeted with the tool. Fair enough, and another case of Microsoft's view being front and center in the search results of tomorrow.

The world's largest software company wouldn't be promoting blogging if it didn't think it was good for the bottom line. Slashdot is certainly the most popular technical blog, and Microsoft has long sought a counterweight to that site's zeitgeist. The "Scobleizer" blog (radio.weblogs.com/0001011) of Robert Scoble, a technical evangelist on the platform strategies team, is the closest it's come. The sheer volume of pastes and links produced by Scoble is daunting and gives lie to his insistence that his blog is a purely personal effort.

The tension between private and professional personas is still very much a gray area in blogging. Will you be fired if you disrespect your employer on your personal blog? Oh yeah. Am I the only one who occasionally feels unsavory commingling notes from my workdays with those from my weekend? I doubt it. Will I stop? Not as long as it keeps bringing me work. ■

Larry O'Brien is a technology consultant, analyst and writer. Read his blog at www.knowing.net.

Presenting a FREE Web Seminar

Optimizing Numerical Applications in Java for Finance

Date: Tuesday, September 27
Time: 11:00 a.m.-noon Pacific time

Quantitative groups are applying Java-based techniques to their critical initiatives. They're also using Java applications to meet the requirements of increased regulation and traceability. Whether for forecasting, trading or portfolio optimization, financial organizations are deploying an array of numerical-analysis applications using Java. This presentation will show how analysts and developers are using the charting and analytical capabilities of the JMSL™ Numerical Library for Java™ applications to improve performance and accuracy. Demonstrations will include forecasting, portfolio optimization charting, heat maps and risk analysis modeling.

Moderator: David Rubinstein
Editor, SD Times
David Rubinstein brings more than 25 years of newspaper experience to his role as editor of SD Times. Over the past five years, he has covered a wide range of software development issues, from the application development life cycle to emerging standards and specifications, as well as the business behind the software business. Rubinstein writes a regular column in SD Times that examines the development industry as a whole.

Sean FitzGerald
Vice President of Technology and Consulting
Visual Numerics, Inc.
As vice president of technology and consulting at Visual Numerics, Sean FitzGerald is responsible for leading the development and implementation of strategy and vision for current and emerging technologies and services. FitzGerald holds many technology certifications, in addition to a B.S. in systems administration and an advanced degree in general management.

Fredrick Doolittle
Product Manager IMSL™ Product Family
Visual Numerics, Inc.
As product manager at Visual Numerics for the IMSL family of numerical libraries, Fred Doolittle has overall responsibility for product roadmap strategy, inbound-user research, product definition, product launches, sales force product education and outbound content for product positioning.

Prior to joining Visual Numerics, Doolittle was product manager at Stamine, with responsibility for software used to measure the performance of stock market analysts. He earned his B.S. in chemical engineering from the University of California at Davis and his M.B.A. from the Haas School of Business at U.C. Berkeley, where he was awarded Beta Gamma Sigma honor society membership.

Dr. Edward Stewart
Expert in Numerical Analysis for Finance Applications
Visual Numerics, Inc.
Edward Stewart received his Ph.D. in physical ocean science and engineering from the University of Delaware. Stewart has experience in many quantitative areas, including quantification and interpretation of statistics and probability, coordination and analysis of large data sets, frequency-domain time-series analysis, ordinary and partial differential equations, finite-difference numerical modeling, nonlinear dynamics and linear algebra. He has also been a major contributor in the development of new features and algorithms in PV-WAVE and the IMSL numerical libraries. Stewart has published many journal articles in areas relevant to his field.

Produced by SD Times

Register at: www.bzmedia.com/webseminar

Sponsored by Visual Numerics

Framework for Success

NEW YORK — Here's what Mike Milinkovich, executive director of the not-for-profit Eclipse Foundation, wanted you to take away from the recent inaugural EclipseWorld conference: Eclipse is more than a Java IDE, and the organization is independent of IBM.

"We're growing up as a community and growing as a platform," he said in a lounge at The Roosevelt Hotel after his opening keynote address at the conference, which was produced by this newspaper's parent company, BZ Media. "But it takes enormous time to change people's perception. We have to stay on message for a long time."

Industry Watch

Perception is one thing, but the reality is that 101 companies have become members of the organization. There are more than 45 open-source projects under way right now. There have been more than 50 million download requests to date.

From its humble beginnings as an IBM-sponsored open-source project for its partners to the foundation's formation in 2003, Eclipse has gone from being positioned by IBM as a Java IDE to a future as a complete development platform with tooling, life-cycle management and rich runtimes. Not bad for four years.

"Was this something I could have imagined? Yes," Milinkovich said of the framework's takeoff. "[But] if I seriously thought about the rate and pace of adoption and new projects, I'd say it caught me by surprise."

Milinkovich cites the organization's governance model when discussing why the group has been so successful in bringing together software companies that often compete with one another. "They're participating using the same rules as everyone else," he explained. "They can share the costs and risks with their partners and competitors.

"So much software is being developed that is just hygiene; there is zero competitive advantage from supporting every standard," he continued. "Why wouldn't you want to share the cost of implementing" the underlying APIs that are at the core of new Eclipse projects?

In Eclipse, when the work is done, everyone has it at the same time, Milinkovich noted, taking a swipe at other organizations that accept completed, implemented projects from a small number of software companies and proclaim the work a standard, without industry input or review. "And even after all that standard work, you're not sure you have something that will drive real business value to customers," he said.

Eclipse is not looking to create industry standards, Milinkovich said; the group simply wants to provide an industry-ready technology stack that uses the same plug-in architecture for companies to build products on top of, and for developers to use to create their enterprise applications.

Of course, with Microsoft poised to release the next version of its Visual Studio development environment and the Team System role-based tools in November, Milinkovich used the EclipseWorld stage to take a few swipes at Eclipse's main competition in the development platform space.

Discussing the rapid adoption rate of Eclipse, Milinkovich said: "We have one guy in marketing with a budget of $20,000 a year. What a marketing machine! We're not a monolithic organization spending millions on marketing."

One feature of Eclipse that Milinkovich singled out is the Rich Client Platform, the foundation's answer to Microsoft's .NET SmartClient. One of the five reasons Milinkovich cited for using RCP instead of .NET SmartClient was: "all the features without being tied to a vendor."

The Rich Client Platform, of which IBM's Workplace client replacement for Lotus Notes is an early implementation, provides a way to build, deploy and manage rich-client applications in a multiplatform way, Milinkovich said. It was spurred by user dissatisfaction with HTML, he said. "We're not just delivering content now, but transactional apps. The need for UIs is driving this demand."

ISVs are looking at Microsoft's next-generation Windows Vista and trying to understand how to deal with it, he said, while RCP straddles Vista and Win32, giving the look and feel of Vista without getting locked in. "This solves problems developers will have to deal with over the next few years," Milinkovich said.

New projects are coming down the pike that Milinkovich believes will round out Eclipse. Serena is heading up an application life-cycle framework effort—"Think of it as an enterprise service bus for tools," Milinkovich said—and Computer Associates is leading a systems management project. While there is currently no open-source project at Eclipse for handling requirements, that would be the last piece needed to complete the life cycle, he said, noting that there are commercial requirements tool plug-ins available.

It is this mix of open-source and commercial opportunity that should give Eclipse a great chance to compete against Microsoft. Historically, Microsoft development tool partners are embraced and extended out of existence. Eclipse offers companies the opportunity to seed the community with a scaled-down, open-source version of their products, which should drive customers to buy the full-featured tools when needed. Happy developers, happy ISVs. Now that's a framework for success. ■

David Rubinstein is editor of SD Times.

BUSINESS BRIEFS

Mercury Interactive will have to restate its financials for fiscal years 2002, 2003, 2004 and for the first quarter of fiscal-year 2005 based on the findings of an audit committee formed by the company's board of directors. The company does not expect to be able to refile the statements covering those periods, or its state of second-quarter 2005 earnings, before November. The errors in the earlier reports stem from the timing of past stock option grants, resulting in the company's facing additional charges to its stock-based compensation expenses. Mercury currently is evaluating the controls it has in place to monitor financial reporting. The failure to file Q2 2005 financials also threatens to make US$800 million in notes come due early if the situation is not rectified by Oct. 25.

EARNINGS: Novell reported revenue of US$290 million for its third fiscal quarter 2005 ended July 31, a decrease from the $305 million reported in the same quarter last year. Net income was $2 million, compared with $24 million in earnings for the year-ago period. For the quarter, Novell garnered $44 million from sales of Linux-related products, including $31 million from sales of Novell Open Enterprise Server the first full quarter it was available, and $8 million from SUSE Linux Enterprise Server subscriptions. For the first nine months of fiscal 2005, Novell reported revenue of $877 million and net income of $382 million, which included a $448 million net legal settlement with Microsoft . . . **Wind River Systems** reported second-quarter 2006 revenue of US$66.7 million, a 12 percent increase over revenue of $59.4 million for the same quarter a year earlier. GAAP net income for the quarter was $5.7 million, or earnings per share of 6 cents, as compared with net income of $3.3 million, or 4 cents per share, from a year earlier. For the full 2006 fiscal year, the company said it expects revenue to be between $267 million and $270 million, with earnings per share between 26 and 28 cents . . . **Agile Software** announced revenue of US$33.4 million for its first fiscal quarter 2006 ended July 31, an increase of 30 percent over the $26.5 million it reported for the same period in fiscal 2005. On a GAAP basis, the company posted a net loss of $3.3 million for the quarter, or 6 cents per share. In the same period a year earlier, the net loss was $3.0 million, or 6 cents per share. License revenues for the quarter were $13.4 million, compared with $10.3 million for the first quarter of fiscal 2005, a 30 percent increase. ■

CALENDAR OF EVENTS

Oracle OpenWorld — Sept. 17–22
San Francisco
ORACLE
www.oracle.com/openworld

Serena XChange — Sept. 18–21
Washington, D.C.
SERENA
www.serenaxchange.com/serena_2005

Better Software Conference & Expo — Sept. 19–22
San Francisco
SOFTWARE QUALITY ENGINEERING
www.sqe.com/bettersoftwareconf

SD Best Practices — Sept. 26–29
Boston
CMP MEDIA
www.sdexpo.com

Mercury World — Oct. 9–12
Las Vegas
MERCURY INTERACTIVE
www.mercury.com/us/company/events/mercury-world

VSLive Orlando — Oct. 9–13
Orlando, Fla.
FAWCETTE TECHNICAL PUBLICATIONS
www.ftponline.com/conferences/vslive/2005/or

SoftSummit 2005 — Oct. 10–11
Santa Clara
MACROVISION
www.softsummit.com

OOPSLA 2005 — Oct. 16–20
San Diego
ACM SIGPLAN
www.oopsla.org

Colorado Software Summit — Oct. 23–28
Keystone, Colo.
KOVSKY CONFERENCE PRODUCTIONS
www.softwaresummit.com

Software Test & Performance Conference — Nov. 1–3
New York
BZ MEDIA
www.stpcon.com

ASP.NET/SQL Server/ Visual Studio/C++ Connections — Nov. 7–10
Las Vegas
DEVCONNECTIONS
www.devconnections.com

Supercomputing 2005 — Nov. 12–18
Seattle
ACM & IEEE
sc05.supercomputing.org

CA World — Nov. 13–17
Las Vegas
COMPUTER ASSOCIATES
ca.com/caworld

For a more complete calendar of U.S. software development events, see www.bzmedia.com/calendar.

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

BZ MEDIA WEB SEMINARS

Optimizing Numerical Applications in Java for Finance — Sept. 27
Time: 2 p.m. Eastern (11 a.m. Pacific)
VISUAL NUMERICS AND SD TIMES
www.bzmedia.com/webseminar

Five Reasons to Really Care About Application Life Cycle Management — Oct. 11
Time: 2 p.m. Eastern (11 a.m. Pacific)
COLLABNET AND SD TIMES
www.bzmedia.com/webseminar

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